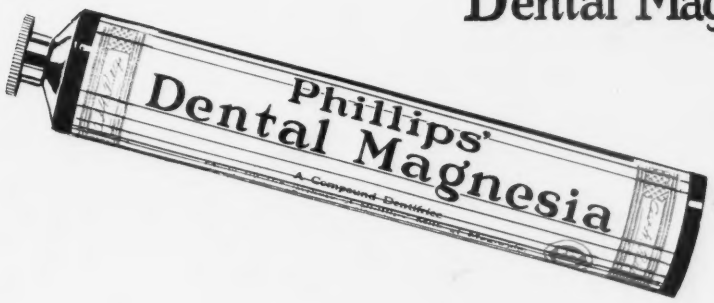
Drug Markets

March 1928

THE JOHNS H... MAR 2? 1928 ...LIBRARY

----, and
now Phillips
Dental Magnesia



IPANA ☆
Forhan's
Norwich
Phillips ☆ ?
Odenco ☆ ?
Sun Tubes
HILLSIDE, N. J.

☆ EXCLUSIVELY

What Rating Can You Give Your Closure?

HAVE you had trouble with leakage, with corrosion, evaporation? Every good business man knows that once his product leaves his control any one of these troubles can pile up sales resistance, divert sales energy from new accounts and cut down repeat business.

You owe it to your business to examine the Spring Stopper and test it for your product. It can be furnished in several materials such as glass, bakelite, rubber, porcelain, etc., in attractive colors. The bottle into which it fits so tightly and securely is the only machine-made bottle with an inside screw thread.

It is easy to apply and can be handled by either automatic machinery or by hand. Spring Stopper closures are now used by many leading manufacturers to give absolute protection to their product, convenience to the user, and a distinctive sales building container.

It's a closure that looks well, is practical, is easy to open and reclose.

Let us send you samples. Test in your own office how thoroughly practical, convenient and good looking it is.

The PERFECT CLOSURE SCORE CARD

CLOSURE	50%	
LEAKAGE } EVAPORATION }		30%
RUST		10%
CORROSION		10%
APPEARANCE	30%	30%
RECLOSURE	20%	
CONVENIENCE		10%
LEAKAGE } EVAPORATION }		10%

Spring Stopper Co.
165 Broadway, New York, N.Y.

Telephone Cortlandt 1495-1496-1497

Patentee of bottle finishing devices applied to the various types of automatic bottle making machines. Patents in United States, Canada and Foreign Countries.

E. R. Squibb & Sons

Conti Soap Distributors, Inc.

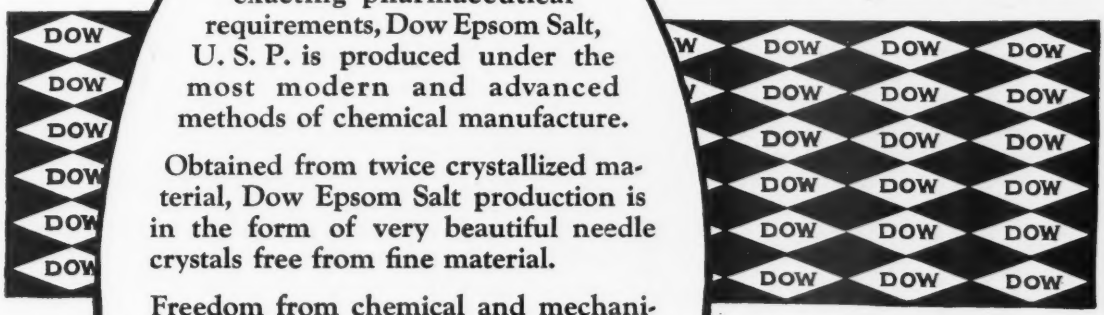
H. K. Mulford Co.

Inecto, Inc.

The only machine-made bottle with inside screw thread.

EPSOM SALT U.S.P.

Recrystallized



To meet your most exacting pharmaceutical requirements, Dow Epsom Salt, U. S. P. is produced under the most modern and advanced methods of chemical manufacture.

Obtained from twice crystallized material, Dow Epsom Salt production is in the form of very beautiful needle crystals free from fine material.

Freedom from chemical and mechanical impurities, added to its fine appearance makes our product most desirable wherever a U. S. P. grade is needed.

We will gladly send representative samples upon request.

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN
Branch Sales Offices:
90 West Street, New York City
Second and Madison Streets
Saint Louis

Air photo of works of The Dow Chemical Company Midland, Michigan

DOW CHEMICALS

March 1928

Drug Markets

Established 1914

The Business Magazine of the Drug Industries

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A New Proposal—The Oil Puzzle—Another Merger—Cheney Tells the Wholesaler—The Imports of Drugs—Camphor Moves Up.

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The April Issue

Oral Antiseptics by Victor Ross of Lehn & Fink, Inc., was not completed in time for the March issue. However, the first part of this very complete article giving the results of the most recent research on antiseptics for the mouth and throat will appear in April.

Imported Crude Drugs—W. R. M. Wharton gives the application of the Food and Drug Act to the more important drugs brought in. He will give the regulations governing each drug, the amount imported, the amount rejected, and other important information.

Harriet Hubbard Ayer—One of the first business women in America and the forerunner of the many cosmetic manufacturers in this country. The story of how she came to engage in this business and of the aggressive methods she employed is a real business romance.

Mercurial Price fluctuations are based primarily on the movement of virgin quicksilver. No one is better able to discuss the market position of this all important raw material than Charles S. Wehrly, who will write a general review on the subject.

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C.C.C
VANILLIN
COUMARIN
BENZOATE OF SODA
BENZOIC ACID

Pacemakers That Hold the Spotlight

THEY remain constantly in the sales spotlight. They loom head and shoulders above their competitors. Sheer merit and firm insistence upon unvarying quality have made them leaders, season after season, year after year.

They are the pacemakers!

There is a direct relation between Commonwealth products and many of the widely-known products that today are recognized as pacemakers. Commonwealth Vanillin and Coumarin both possess a uniformity and purity that help to make dependable quality in these products possible.

Apart from the strict standards of strength and purity maintained in producing Mathieson fine chemicals there is the well organized Mathieson service that insures quick shipments from conveniently located warehouse stocks. We invite you to become one of the long list of Mathieson customers.

Commonwealth Division

The MATHIESON ALKALI WORKS (Inc.)
250 PARK AVENUE NEW YORK CITY

PHILADELPHIA . CHICAGO . PROVIDENCE . CHARLOTTE . CINCINNATI

DEAL DIRECT WITH THE MANUFACTURER

Works: NIAGARA FALLS, N.Y. SALTVILLE, VA. • NEWARK, N.Y.

ALCOHOL THROUGH THE AGES , NUMBER XII

'TWAS USQUEBAGH IN ERIN

Ireland—center of world interest, home of the Shamrock—is said to have learned the secrets of distillation about the twelfth century from Spanish and Italian merchants.

The Irish developed a type of Still notable for its simplicity, and Stills became as popular as fireplaces, one in every home. The product, made from barley, was soon accepted as a Panacea for all ills.

A Crown Tax on certain home manufactured Usquebagh drove many of the natives to the hills, where they set up illicit Stills — as illustrated — but no record is found of any great use of their knowledge of distillation beyond the strictly personal one.

, , , ,

Today, Industrial Alcohol serves as a panacea through its multitude of uses for medicinal as well as industrial purposes. For a great many years the Kentucky Alcohol Corporation has played an important part in supplying Alcohol for such varying needs.

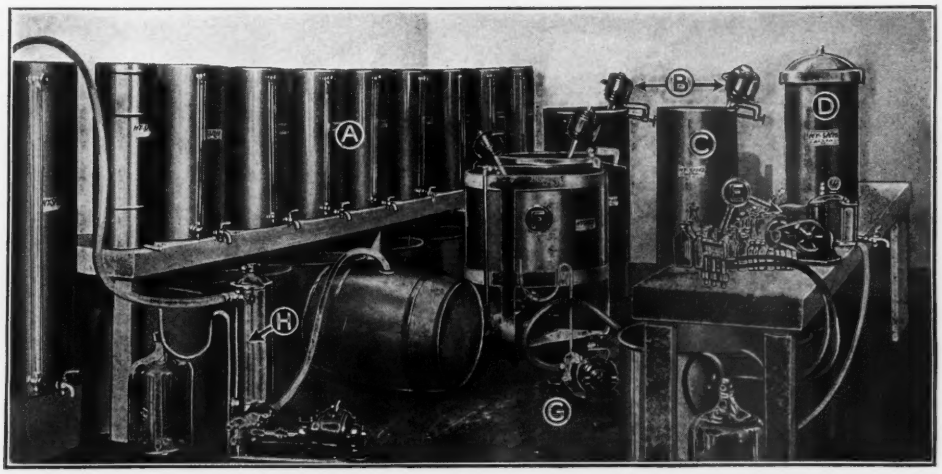
KENTUCKY ALCOHOL CORPORATION

30 BROAD STREET , , , NEW YORK CITY

Address Sales Representatives, Listed in Our Former Advertisements, and Those Which Follow, for Your Industrial Alcohol Needs.

NOTE: This is number TWELVE of a series of advertisements which will appear in this and other trade publications. We have had so many comments and requests for copies of these advertisements that we have decided to issue the entire series in booklet form, after they have appeared in the publications. As the edition will be limited to the number of requests on hand at the time of publication, we invite you to write for your copy now—it will be sent FREE when the booklet is completed. Address the Kentucky Alcohol Corporation direct, or any one of our sales representatives, whose names appear regularly in this space.

We manufacture...



A complete plant lay-out showing **"Hy-Speed"** money-saving equipment.

A. Glass-lined, air-tight storage tanks.....in all sizes and shapes. Surfaced inside and out with a protective glass enamel baked into the metal, at white heat.

B. Portable Electric Mixers.....from ¼ to 5 h. p. ..... **"Hy-Speed"** mixers last longer, mix quicker, cost less.

C. Glass-lined Mixing Tanks.....in a variety of sizes from 5 gallons to 150.

D. Gravity Asbestos Filter Tanks.....automatic in operation .....filter liquids crystal clear.

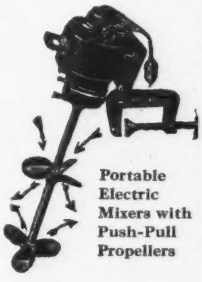
E. Vacuum Bottle Filler....operates from light-socket .....no skilled operator or experience required.

Internal Pressure Filter for all liquids

F. Electric Filter Tank....a complete manufacturing plant on wheels.....Mixes, filters, and pumps liquids in one single operation.

G. Portable Bronze Pumps.....rugged, efficient units embodying many improved details in design. Transports liquids through your plant in the modern manner.

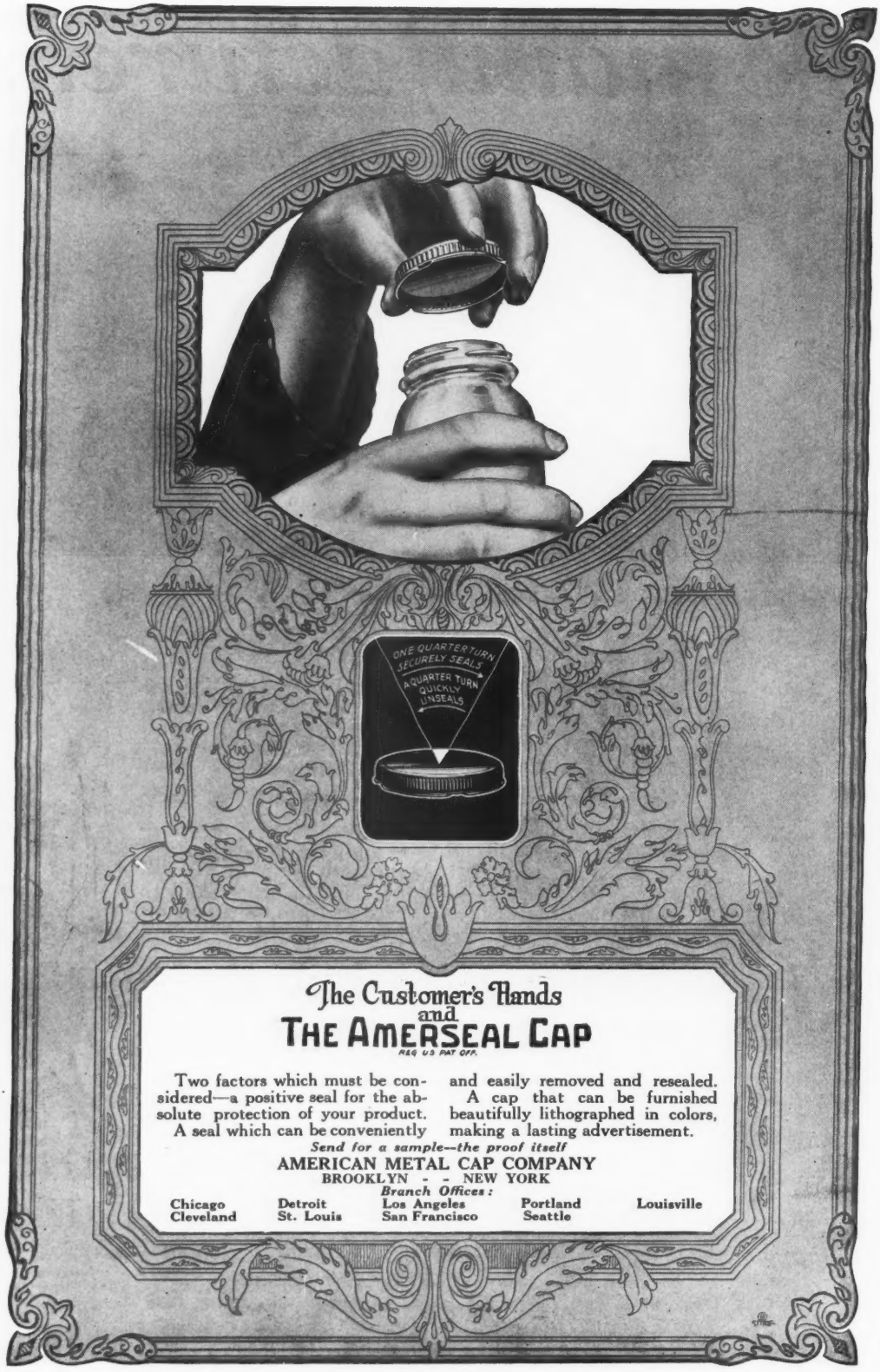
H. Internal Pressure Filters.....a simple, almost automatic unit that solves filtering problems. Capacities up to 600 gallons per hour.



Portable Electric Mixers with Push-Pull Propellers

Have us estimate on a modern, efficient installation of "HY-SPEED" equipment.....our prices and terms will interest you. Write for complete catalogues.

ALSOP ENGINEERING CO., 47 WEST 63rd ST., NEW YORK CITY



The Customer's Hands
and
THE AMERSEAL CAP
REG U.S. PAT. OFF.

Two factors which must be considered—a positive seal for the absolute protection of your product. A seal which can be conveniently and easily removed and resealed.

A cap that can be furnished beautifully lithographed in colors, making a lasting advertisement.

Send for a sample—the proof itself

AMERICAN METAL CAP COMPANY
BROOKLYN - - NEW YORK

Branch Offices:

Chicago, Cleveland, Detroit, St. Louis, Los Angeles, San Francisco, Portland, Seattle, Louisville

Cuts Packaging Costs to the Bone

Speed alone is sufficient to cause you to consider Fee Process Filling and Weighing Machines . . . but other advantages will clinch your desire to adopt them as standard equipment.

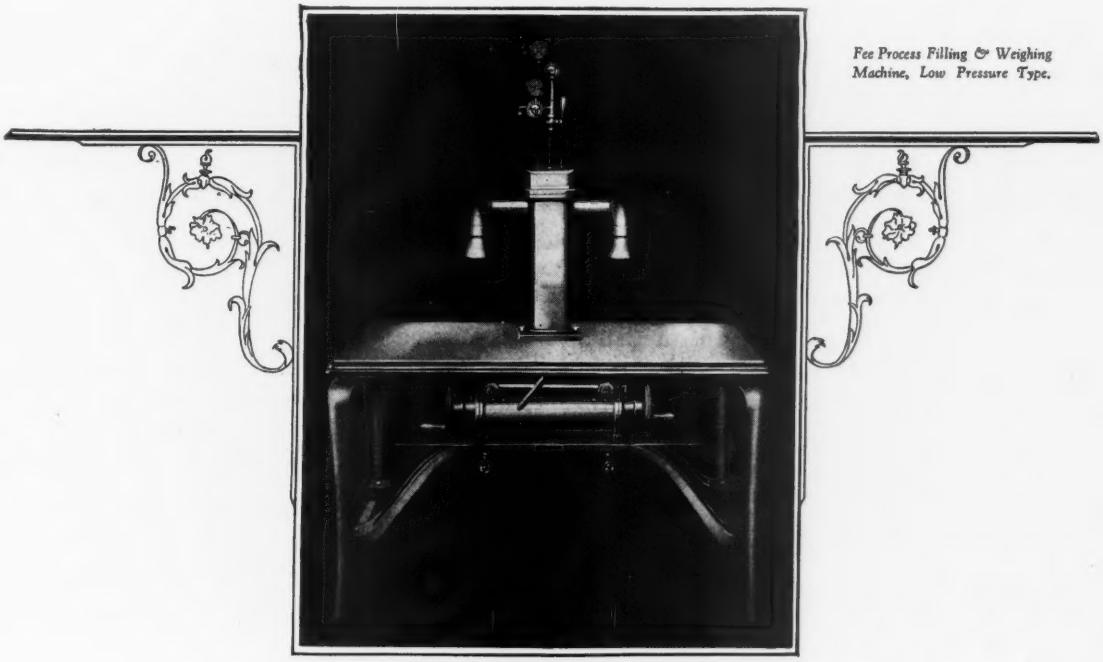
For Fee machines fill and weigh *accurately*, as well as speedily. They save the excess material that you would normally put in each container to insure against short weight. Fee machines are flexible . . . each model having a wide range of capacities. This flexibility cuts down investment expense, for one Fee machine will serve many different sizes of packages.

Fee machines do not require skilled operators.

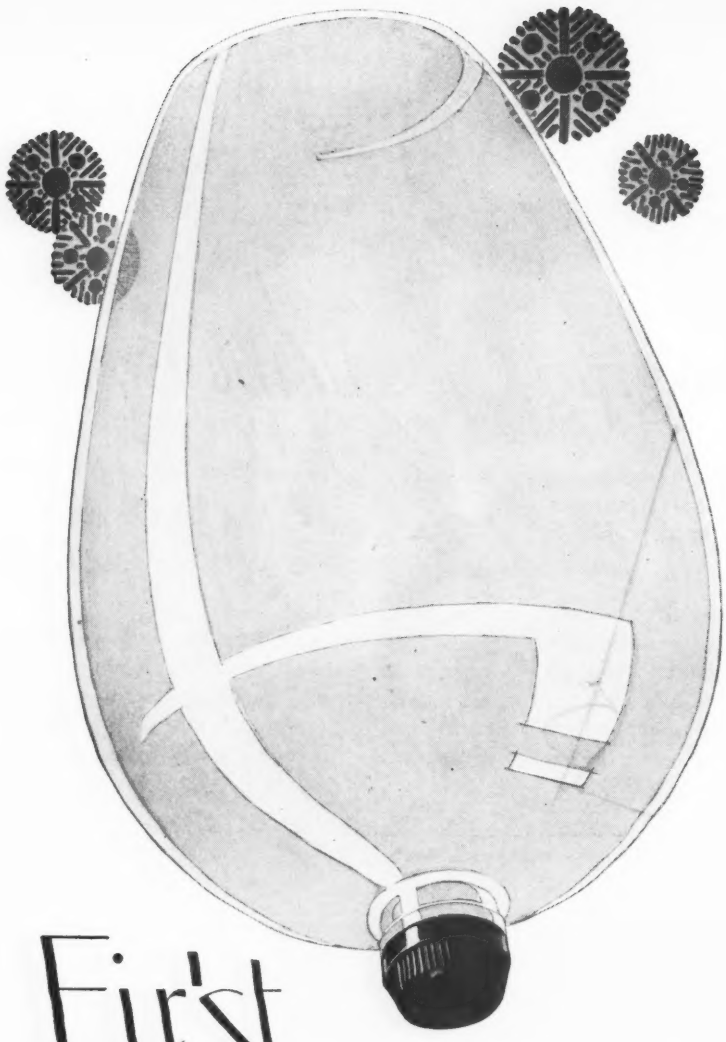
And Fee machines are easy to keep clean . . which means increased life . . .

Succeeding advertisements in this series will outline these points in detail. Meanwhile, if you are interested in cutting your packaging costs to the bone, write now for full details, telling us your product and the sizes of packages you use.

AMERICAN MACHINE & FOUNDRY CO.
Sales Offices 511 Fifth Avenue, New York, N. Y.
Works 5502-5520 Second Avenue, Brooklyn, N. Y.



Fee Process Filling & Weighing Machine, Low Pressure Type.



First Impressions—

The closure is the first part of your package that the buyer sees at close range. Almost invariably the bottle is handed out for inspection with stopper foremost. In that decisive instant—a very important one for you—when the buyer mentally accepts or rejects, what does your closure tell the buyer about your product?

If your closure is an Armstrong's Embossed Top Cork, it will give an impression of quality, of cleanliness, and convenience. It will attract—hold—*sell*. Samples and prices sent cheerfully on request. Armstrong Cork Company, 132 Twenty-third Street, Pittsburgh, Pa.

Armstrong's EMBOSSED TOP Corks

ALUMINUM
Collapsible Tubes

Famous Products Perfectly Delivered

Prominent in the illustrious line of toilet and medicinal requisites that are packed in tubes of Alcoa Aluminum are The Armand Company's famous Cold Cream and Cleansing Cream.

TO the multitude of women who use the delightful Armand Creams, the Armand Company affords a further assurance of sustained quality and purity by packing these products in tubes of Alcoa Aluminum.

We present the Armand Creams as another graphic example of how Alcoa Aluminum, the famous safety metal, accomplishes for manufacturers of tube packed products that most unique combination of true quality and true economy.

Alcoa Aluminum Tubes present advantages that no manufacturer can afford to disregard.

On the one hand costs are reduced. Alcoa Aluminum Tubes cost less to buy and also less to fill and ship.

On the other hand, the packer's most exacting requirements are maintained.

Alcoa Aluminum Tubes possess the perfect balance of strength and flexibility; they take all colors beautifully, finish beautifully, and guarantee the safe and satisfactory delivery of the products they carry.

It is for these reasons that in 1927 *forty additional manufacturers* chose Alcoa Aluminum Tubes.

In this relatively limited field, forty new users in one year demonstrates authoritatively that the advantages of Alcoa Aluminum Tubes are well worth investigation and careful consideration

Technical Service

To the packers wishing further information we offer the technical knowledge of our laboratory force. The services of these men are available upon request and entail no cost or obligation.

Aluminum Company of America

2473 Oliver Building, Pittsburgh, Pa.

Offices in 18 Principal Cities

ALUMINUM

ALUMINUM IN EVERY COMMERCIAL FORM

It will *stay* 'til she's ready to use it. Then— OFF *with a twist of the fingers*

R-O Aluminum Seals will appeal to you because they provide *perfect* hermetic sealing and because, in all probability, they will simplify your packing and reduce its cost.

Your customers—the ultimate consumers—may not even know what "hermetic" means; but they'll know that your product is perfectly kept until they are ready to use it, if it is R-O Sealed. They will appreciate, too, the convenience of R-O Seals: tight as can be until they are ready to open the bottle—then off with a twist of the fingers. When replaced they make an excellent reseal.

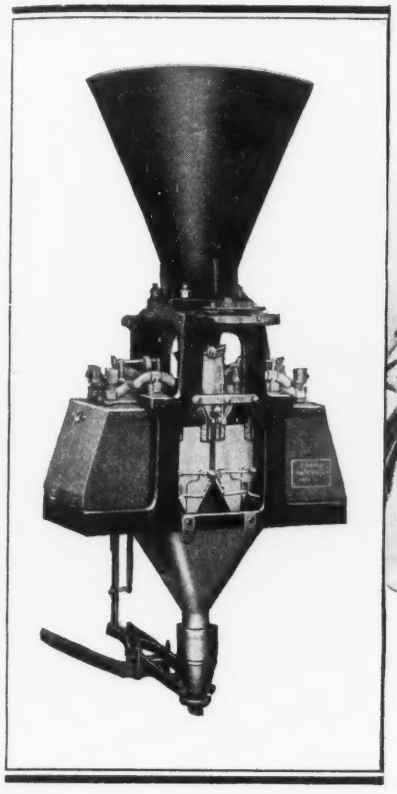
R-O Seals—made of pure Alcoa Aluminum, the non-rusting metal—are applied by a special sealing machine that holds the blank seal firmly in place, shuts out the air and forms the threads into the threads of the bottle—all in one fast operation.

They are available with liners for every purpose and may be lithographed with any color or design you desire. Write for information.

R-O
Aluminum Seals

ALUMINUM COMPANY OF AMERICA
2459 Oliver Building, Pittsburgh, Pa.
ALUMINUM COMPANY OF CANADA, Ltd., Toronto, Montreal, Canada

ALUMINUM IN EVERY COMMERCIAL FORM



"and here's one for good measure"

IT was a delightful custom in the good old days . . . . but it is out of place in business now. Yet many manufacturers are purposely giving over-weight with each package of material, because they are not sure of the accuracy of their scales.

The No. 200 Automatic Continuous Stream Scale will eliminate this waste. At a speed of approximately 45 per minute it fills containers with balanced weights of any fairly free flowing material in 90% of the cases (in the remainder the greatest error will not exceed 1/16 oz.). And the range of weights is from 0 oz. to 20 oz.

This automatic scale is saving waste in many representative American plants today. May we tell you of some specific cases?

AMERICAN MACHINE & FOUNDRY COMPANY
AUTOMATIC WEIGHING MACHINE DIVISION
Sales Office: 511 Fifth Avenue, New York, N. Y.
Plant: 5502-5520 Second Avenue, Brooklyn, N. Y.

AUTOMATIC MACHINERY

Chemical Progress

is always forecast in

Patent Literature

The revolutionary changes--new processes--new products--that will affect your business to-morrow are being reported to-day in CHEMICAL PATENTS. That is why alert executives and chemists want to keep posted on patent literature. You can do so easily, quickly, at little cost through our patent bulletins which give title, a brief abstract, the patentee, the assignee (if any), and number, for all chemical products and processes and apparatus patents in the United States, Germany, England, France and Canada, issued three times a week, arranged alphabetically, each country on separate sheets, all translated into English and mailed under letter postage at a yearly cost of less than the subscriptions to patent gazettes, with the abstracting, translating and classifying done for you.

BUREAU OF ECONOMIC CHEMISTRY
180 William St., New York City

Send me a free sample of your Patent Bulletins and tell me about this service

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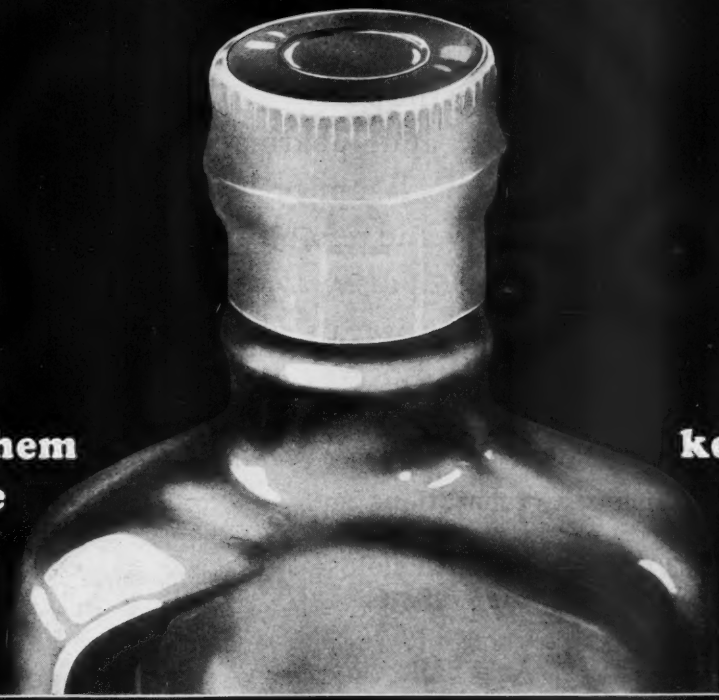
Get This
Protection for Your Drug Products
Capes-Viscose Band Seals



keep them safe

keep them clean

Capes-Viscose improve the appearance of your package. They give your bottles a clean, sanitary look which inspires buyer-confidence. Capes-Viscose form a safe, air-tight seal for your product and guard it against every tampering evil prevalent in the industry today.

Find out more about this simple, inexpensive method of beautifying and protecting your drug products. It is now possible to use the Capes-Viscose Band Seal at small cost. Simplified manufacturing methods bring it well within reach of all. Write for samples and prices.

CAPES-VISCOSE, INC.

Sales Office
132 MADISON AVE., NEW YORK

Factory
DELAWANNA, N. J.

DISCRIMINATION

is the prerogative of every buyer and should be exercised especially in the purchase of pure Chemicals for medicinal and pharmaceutical uses. Mallinckrodt Chemicals appeal to the critical users whenever purity and reliability are required. They represent *distinctive excellence*, the natural development of over 60 years of manufacturing experience.

Bismuth Preparations
Iodine Preparations
Pure Medicinal Alkaloids
Pure Granulated Salts

Acid Salicylic
Sodium Salicylate
Acid Acetylsalicylic
Methyl Salicylate

Ether for Anesthesia
Ether U. S. P.
Ether Motor
Ether Anhydrous

Inquiries solicited
Complete list of products on application

MALLINCKRODT CHEMICAL WORKS
SAINT LOUIS MONTREAL PHILADELPHIA NEW YORK

Drug Markets

Vol. XXII MARCH 1928 No. 3

Animated Bankruptcy

THAT an overwhelming majority of the citizens of Jimmy Walker's baliwick have never visited the Statue of Liberty nor mounted the Woolworth Tower is a fact that, while it has its humorous side, nevertheless reveals a very human trait. That the Department of Commerce should be able to tell an inquiring American businessman the pounds of glue consumed in Malta or supply a list of the pickle merchants of Pekin without knowing the quinine consumption of Louisiana nor the tonnage of cosmetics sold through five-and-ten-cent stores illustrates the same failing. Only it did not appear to be a joke either to Mr. Hoover or his able Director of the Bureau of Foreign and Domestic Commerce. Accordingly, under Dr. Klein's direction, a series of intensive surveys of American markets and marketing methods have been undertaken. He laid some preliminaries of the facts so learned before the group of chemical executives who met in Washington last month. As there were but a sprinkling of drug industries leaders among that group and as these facts show the high cost of distributing through retail drug channels in a new light it is desirable to broadcast this news.

DID you appreciate, for instance, that one third of all the retail stores in America are doing a gross annual business of less than five thousand dollars. Gross business, mind you, out of which must be paid rent, stock, taxes, wages, overhead! Dr. Klein is obviously justified in his striking statement that "the average retailer is not in business: he is in a state of animated bankruptcy." His conclusion that "the business problem of retail distribution should be considered with more intelligence and less emotion" bears thinking over.

IN a hazy, happy-go-lucky sort of way most drug trade manufacturers have long believed that some 300 jobbers and over 50,000 retailers were too many. Specific instances of four wholesalers where two would do a good business and serve adequately, and of three of the four corners occupied by drug stores have often been pointed out; but Dr. Klein's figures show how universal is the distributing over-population and emphasize the cost of such conditions. Looked at intelligently—not emotionally— the drug industries have been sending a five ton truck to deliver a bottle of Lysol and a Princess Pat compact.

A New Proposal

We read in the official organ of the Associated Druggists of New Jersey, that Mr. D. A. Schulte is to set aside ten per cent. of the sales of products of American Druggists Syndicate, Vivadou, Djer Kiss, and Melba to members of the Association. This ten per cent. is to be given to the Association itself as a gift or a bonus. The writer of the article states that, based on previous sales to members, this bonus would total $20,000 annually; but this added incentive will, in his opinion, raise the bonus to $100,000 annually. The bonus offered affects in no way the discounts given to members themselves, but is a gift to the Association and is an additional expense to Mr. Schulte in the distribution of his products.

Thus at a sweep of the hand, sales of Mr. Schulte's products to the members of this Association are to be increased five-fold. No increased effort on the part of the sales or advertising departments are required, no improvement in production methods or products or anything else is necessary—perhaps even lessened efforts in sales or advertising or something else shall be directed to make up in part this additional ten per cent. that makes the sales leap over night.

How will such a procedure be received by other manufacturers ? Will they attempt to raise the ante; will they give larger discounts to retailers themselves; or will they find some still more subtle way of giving their money away to buy competition out of the picture ?

Unsound as the method is economically, it is fraught with great danger for Mr. Schulte, the extent of the danger depending on just what use is made of the money given away. The writer in the official organ gives his private opinion that the money should be used to hire detail men to visit physicians in an effort to have them prescribe U. S. P. and N. F. products instead of "the expensive proprietaries which so many of them have been prescribing." He says that letters should be sent once a month to these physicians explaining how they, as well as the public, will benefit by so doing.

Thus Mr. Schulte will contribute $100,000 toward putting out of business manufacturers of medicines that have become as standard as products found in the U. S. P. and N. F. despite the fact that the retail druggists would have one believe that these two books contain the only reliable products in existence. Physicians know and understand the merit of certain trademarked medicines and ofttimes prefer them to any of the formulas commonly compounded by druggists. These physicians also know that the vast majority of manufacturers of packaged medicines are reliable and that the chemical control in their plants is far more reliable than the human element of the average independent or chain store pharmacist. On the other hand why not U. S. P. or N. F. cosmetics or cold creams or other toilet preparations to compete with Mr. Schulte's Vivadou, Melba, and Djer Kiss products ? Will the Association discreetly ignore the products that might work to the detriment of their esteemed benefactor himself ?

While the idea back in Mr. Schulte's mind is probably that, by making such a gift to an organization of independent druggists, he is helping the cause of the independent drug manufacturer in his fight with chain store distribution, Mr. Schulte must surely realize that drug manufacturing and drug retailing are two different branches of an industry with entirely different aims. Manufacturers have no interest in retailers except insofar as they furnish outlets for manufactured products, and likewise retailers have no interest in the manufacturers except insofar as they give them products at prices that bring a profit.

A motto that any drug manufacturer can use to-day when distribution presents the most pressing problem, is "beware of entangling alliances." Thus manufacturers must not ally too closely with chains, with mutuals, with retail or wholesale associations, but much rather with each other and in each other's associations.

The Oil Puzzle

Conditions in essential oils have puzzled the dealers for some time past. Although demand was good over the past year in line with the general business conditions throughout the year, prices declined steadily and have refused to respond to the usual signs that in the past have presaged higher markets. On many occasions dealers have predicted higher markets on many oils only to have these predictions go for naught with prices on the decline rather than the advance.

With the new year rushing into its second quarter the same conditions exist. Many of the oils that have been at a price sharply lower than recent years, continue at these low levels despite bullish reports from the primary markets. Many dealers are becoming very skeptical of the news that comes out of the primary markets and are beginning to have less faith in the sources of this information.

In many instances, however, the price position of an oil has definitely changed for all time. The synthetics, which often come from another oil entirely or from a coal tar base, are working their influences over rather long periods. These influences do not effect an immediate change, but gradually make their weight felt in such a way that the oil effected has an entirely different place in the industry from point of value.

Another Merger

Zonite Products has taken over the assets of the Agmel Corporation, producers of a fresh sap of the Mexican maguey plant which is considered to have therapeutic qualities. Thus the first step in the intended program of this company to market a full line of drug products is taken, and others may well be expected to follow. The number of drug manufacturing companies seeking expansion through the acquisition of weaker companies of long standing in the industry is impressing to say the least. Far better for the industry to take such a course and eventually resolve into strong hands that will direct its course along more definite lines, than to have these newer companies expand by themselves and thus over-crowd the producing field, increasing the difficulties for all factors in the industry for the long period during which the survival of the fittest is being worked out.

Cheney Tells The Wholesaler

Wholesalers recently received a real truthful statement of their shortcomings at the hands of O. H. Cheney. In no muzzled fashion he told them why they had helped rather than hindered the growth of distribution systems that eliminated them. He told them that they were inefficient and that they had failed to perform the functions which are rightfully theirs. He told them that they had reached out and taken unto themselves the functions of manufacturers and retailers where such functions looked profitable. In other words the wholesalers had ceased to become wholesalers and were a conglomerate something else.

The truth of Mr. Cheney's statements must have struck full force at those wholesalers who have tried all methods of improving their profits and their conditions other than becoming more efficient wholesalers. There is no doubt that the other fellow's lawn looks greenest, to most every one, but the wholesalers as a group have done more than their share in stepping out of their own fields and usurping those of the manufacturer and the retailer. In so doing they have rendered service to neither one of the groups whose good will supports them, and consequently have been left without anyone to turn to.

But the real fact that Mr. Cheney drove home in his talk, lies in the fact that no matter by what system goods are distributed, the functions are the same if all systems are operated on an efficient basis. In other words the wholesaler cannot be eliminated in functions, but only in name. Chain store distribution calls for warehouses and all the other parts of a wholesaler; so does the mutual; so does the so-called factory-to-you. So economically the wholesaler has his place in the present scheme of things if he will only recognize it, stay in it and fill it.

Simplification

Simplification can work wonders for the drug manufacturing industry if it can ever be applied in an appreciable measure. Its application, however, is a slow process which calls for much co-operation and willingness on the part of manufacturers besides many conferences and much inconveniences to the manufacturers to effect its adoption. Its adoption by the gauze and bandage manufacturers is a splendid example of what can be done. Of course manufacturers of other products will cry that gauze and bandages are made by comparatively few concerns and therefore the application of simplification to its problems is a far more simple affair than it would be in the case of the bottlers of cod liver oil, or the manufacturers of extract of ergot. However, its advantages are so obvious that no group of manufacturers can afford to belittle the good it would work for their particular problems without a real attempt at its application.

The Import of Drugs

Failure of imported goods to pass the requirements of the Government regulations as enforced by the Food, Drug and Insecticide Administration of the Department of Agriculture, oftimes causes delay and embarrassment to both the importer and the consumer of these products. In an easy market the delay is not felt by the consumer, as the seller is able to replace the goods from stocks on hand or from other quarters and so absorb the shock himself. In such cases the consumer can thank his lucky stars that he has a crude drug

importer to take these chances and attend to these many details for him.

The delays that occur in the importation of crude drugs are not readily understandable to a great number of consumers who have a very slight knowledge of the law and its application. Only when shortages arise do they show the slightest interest in the import regulations; and then only because they demand some explanation from their crude drug dealer.

To further acquaint the consumers of crude drugs with the application of the law to imports, W. R. M. Wharton, Chief of the Eastern Inspection District, tells in this issue of the method of procedure under the law. This will give consumers some idea of the red tape that they are escaping by not attempting to import direct in a futile effort to save a few cents that will disappear before they get through. Mr. Wharton's article will also impress upon them the stringent regulations that the drugs must meet before they will be allowed to receive them.

Camphor Moves Up

Speculatively active markets are signs of good business. When there is a steady consuming demand with buyers more anxious about obtaining goods than about prices paid, then importers and dealers become intensively interested in studying conditions surrounding the products in which they specialize. A few months ahead they lay their ground work, and soon we hear rumblings of "firmer conditions in the primary markets," and "shortage abroad," and many other tales conceived to fit the particular case in mind.

Camphor has exhibited strength for the first time in three years. We hear of trouble developing in the use of synthetic camphor in lacquer and of a sudden rush to natural camphor for this use. As a matter of fact camphor has not been used in lacquer for several years. The present strength in camphor is the result of a temporary shortage of supplies made possible by the fact that the Japanese producers have at last arrived on a production schedule that is close to consumption needs. Factors have bought all production up to May and the price has advanced.

While such speculation causes consumers to pay higher prices for a time, it has a very wholesome effect of impressing upon consumers their dependence upon their suppliers. It is only natural that these suppliers should give first thought to themselves, but their vigliance in watching markets and protecting consumers from those who would speculate with no consideration of where the material goes, is something that consumers will do well to appreciate.

The advantages of glass as a container for products of the drug manufacturers have been appreciated as long as bottles have been in existence. No container for liquids has arisen at any time to threaten the supremacy of glass made possible principally by its chemical inertness. One of the outstanding faults of glass, however, has been its inability to shut out light rays where such rays have proven deleterious. The fact that the rays that sift through clear glass have broken down several products, has been a source of annoyance to drug manufacturers for many years. The subject has never received the attention that it should have received to make possible the use of glass with the utmost efficiency in all the applications that are presented.

{ *Ten Years Ago* }

(From Our Pages March 1918.)

Schieffelin & Co. elects following officers: William Jay Schieffelin, President; William L. Brower, Schuyler Schieffelin, and Howell Foster, vice-presidents; Henry H. Livingston, secretary; and Howard Foster, treasurer.

United Drug Co. summoned by Federal Trade Commission to answer complaint that company has sold proprietary medicines at less than cost in effort to suppress competition in interstate commerce.

Monsanto Chemical Works purchases Commercial Acid Co. at reported price of $2,000,000 and announces consolidation of two incorporations into one company with $5,000,000 capital.

Leroy Oldham, formerly with H. P. Gilpin Co., Baltimore wholesale druggists, establishes drug brokerage business.

Thomas E. Delano, president of C. N. Crittenton Co. which dissolved last year, dies March 22, aged 83.

Lennox Chemical Co.'s Cleveland plant destroyed by fire with estimated loss of $100,000.

J. S. Lee & Co., Toronto, incorporates with 40,000 to manufacture drugs.

Fred L. Meyers Co. incorporates with $100,000 to manufacture drugs.

Clayton Rockhill, Rockhill & Vietor, dies February 28.

Japanese government plans manufacture of quinine.

Frederick Ayer, J. C. Ayer & Co., dies March 16, aged 96

Krayer Chemical Co. plans manufacture pharmaceuticals.

National Association of Fruits and Flavoring Syrups organized.

Saccharin prices decline to $18 @ $20 lb.

Importing Crude Drugs *under the* *Federal Food and Drug Act*

By W. R. M. Wharton

Chief, Eastern District, Food, Drug & Insecticide Administration

THE Federal Food and Drug Act, approved June 30, 1906, and amended by three subsequent congressional enactments, namely, those of March 23, 1912, March 3, 1913, and July 24, 1919, prohibits the importation or exportation of and interstate commerce to any adulterated or misbranded food or drug. The Act itself defines foods and drugs and establishes legal requirements for each, and authority for its enforcement is now lodged mainly in the Food, Drug and Insecticide Administration of the United States Department of Agriculture.

This article will cover a very limited phase of the application of the Federal Food and Drug Act, since I am intending to discuss only the application of this law to crude drugs as offered for importation into United States.

In order to prepare a proper foundation for this discussion it will be necessary to describe the requirements of the Food and Drug Act as applicable to crude drugs and to quote certain of the provisions of the Act itself so that the basis for the control which is exercised may be evident.

Blank & Stoller

In view of the misunderstandings arising from the enforcement of the Federal Food and Drug Act toward imported crude drugs, Mr. Wharton has set forth the procedure of the Department of Agriculture and the reasons for the methods employed.

In the second section of the article next month, Mr. Wharton, will give the facts of the application of the Act toward specific drugs over the past year.

Section 6 of the Food and Drug Act states "that the term, drug, as used in this act shall include all medicines and preparations recognized in the United States Pharmacopoeia or National Formulary for internal or external use, and any substance or mixture of substances intended to be used for the cure, mitigation or prevention of disease in man or animals."

Section 7 of the Act provides that drugs shall be deemed to be adulterated "if, when a drug is sold under or by a name recognized in the United States Pharmacopoeia or National Formulary it differs from the standard of strength, quality or purity as determined by the test laid down in the United States Pharmacopoeia or National Formulary official at the time of investigation," the exception being made, however, that "no drug defined in the United States Pharmacopoeia or National Formulary shall be deemed to be adulterated under this provision if the standard of strength, quality or purity be plainly stated upon the bottle, box, or other container thereof, although the standard may differ from that determined by the test laid down in the United States Pharmacopoeia or National Formulary."

Likewise, a drug is defined as adulterated if "its strength or purity fall below the professed standard or quality under which it is sold." The Act also defines and prohibits misbranding of drugs.

Section 11 of the Food and Drug Act provides a procedure for excluding from entry into the country articles of foods or drugs which are found to be adulterated or misbranded under the Act, and assigns duties to the Secretary of the Treasury and the Secretary of Agriculture in connection with the administration of the law as it applies to imports. I

quote for the sake of insuring complete understanding Section 11 of the Food and Drug Act in its entirety:

"The Secretary of the Treasury shall deliver to the Secretary of Agriculture, upon his request from time to time, samples of foods and drugs which are being imported into the United States or offered for import, giving notice thereof to the owner or consignee, who may appear before the Secretary of Agriculture, and have the right to introduce testimony, and if it appear from the examination of such samples that any article of food or drug offered to be imported into the United States is adulterated or misbranded within the meaning of this Act, or is otherwise dangerous to the health of the people of the United States, or is of a kind forbidden entry into, or forbidden to be sold or restricted in sale in the country in which it is made or from which it is exported, or is otherwise falsely labeled in any respect, the said article shall be refused admission, and the Secretary of the Treasury shall refuse delivery to the consignee and shall cause the destruction of any goods refused delivery which shall not be exported by the consignee within three months from the date of notice of such refusal under such regulations as the Secretary of the Treasury may prescribe: Provided, That the Secretary of the Treasury may deliver to the consignee such goods pending examination and decision in the matter on execution of a penal bond for the amount of the full invoice value of such goods, together with the duty thereon, and on refusal to return such goods for any cause to the custody of the Secretary of the Treasury, when demanded, for the purpose of excluding them from the country, or for any other purpose, said consignee shall forfeit the full amount of the bond; And provided further, That all charges for storage, cartage, and labor on goods which are refused admission or delivery shall be paid by the owner or consignee, and in default of such payment shall constitute a lien against any future importation made by such owner or consignee."

Formulation of Regulations

Provision is made in the Act for the formulation of uniform rules and regulations by the Secretary of the Treasury, the Secretary of Agriculture, and the Secretary of Commerce for carrying out its provision and the three Secretaries in question have promulgated rules for the enforcement of the Act which are printed and distributed by the United States Department of Agriculture. Of particular significance in connection with the discussion which I am proposing to undertake are regulations No. 29 and No. 30, which provide in detail the procedure to be followed as authorized in Section 11 of the Food and Drug Act. This procedure can be more concisely and briefly treated by a direct description than through quotation of the regulations outlined, and at the same time details of the operation of import control of crude drugs can be furnished.

The Food, Drug and Insecticide Administration of the United States Department of Agriculture has organized its field forces into Station and District organizations, maintaining inspection forces and laboratories, called Stations, in the following cities, which are the chief ports of entry of the country: New York City, Buffalo, Rouses Point, N. Y., Boston, Philadelphia, Baltimore, Savannah, San Juan, R. P., covering and constituting the Eastern District, with District Headquarters at New York; Chicago, Minneapolis, St. Louis, Cincinnati, New Orleans, Kansas City, constituting the Central District, with headquarters at Chicago; San Francisco, Seattle, Denver, Los Angeles, constituting the Western District, with headquarters at San Francisco. At these points directly, and at all other ports of entry indirectly, the Treasury Department makes available for inspection to the various agents of the Food, Drug and Insecticide Administration all invoices covering imports of foods and drugs, when a determination is made by the agent of the Administration as to whether or not samples are desired and by a system of endorsing the invoices, the wishes of the Administration are brought to the attention of the proper Treasury officials. The Administration, when samples are not desired, stamps the invoice, "No sample desired," whereas, when samples are desired, the proper notation to this effect is made on the custom house entry records and the Treasury officials thereafter on this record, without further notice, collect and deliver to the Administration's Station samples from the importation represented. Exception to this procedure is that at the Port of New York samples of various kinds of merchandise are collected from parcels in customs custody by agents of the Administration.

Procedure of Sample

In connection with the entry of products subject to the provisions of the Food and Drug Act the importer files a bond conditioning that he will return the merchandise to customs custody upon demand of the Collector of Customs, and he agrees to perform any and all requirements which are imposed with respect to the importation by the government.

Immediately upon taking a sample, the Administration's local representative mails to the importer of record a notice over the signature of the Appraiser of Merchandise that a sample has been drawn and that the shipment should be held intact at port of entry pending result of analysis. The Administration's local representatives then proceed to examine the product to determine whether it complies fully with the provisions and terms of the Food and Drug Act. The examinations of crude drugs involve chemical tests to determine purity and agreement with chemical constants for ash, alkaloidal contents, etc., established for the various products in the U. S. Pharmacopoeia and the National Formulary, and as administrative

standards; physical, organoleptic, and pharmacognosy examinations to establish identity, cleanliness, soundness, genuineness; and in respect to some products, biological assays, to determine potency. For testing crude drugs the Administration employs experts and these experts are constantly engaged in examining imported crude drugs to insure compliance with the provisions of the Food and Drug Act.

After analyses are completed conclusion is reached as to the admissibility of the merchandise represented by the sample. If the product is found to comply with the law, release is issued at once, the Collector of Customs being advised that the product is admissible and the importer is furnished with a copy of the release notice.

Ordering Detention

If adulteration or misbranding, within the meaning of the Act, is found, a decision is reached promptly to detain the merchandise represented, the Administration's representatives sending detention notice either over the signature of the Collector of Customs by agreement with him or, in some cases, over the signature of the Chief of the Station of the Administration, directly to the importer of record, specifying wherein under the law the product is deemed to be at fault, and giving the importer an opportunity to present oral or written evidence, if he has any, to controvert the conclusions of the Administration.

If the importer at the hearing presents any evidence to indicate error in the Administration's analyses or conclusions, the Administration reviews the case, making any additional samplings and tests necessary, and if the Administration then finds that the product is actually in compliance with the law, release is issued forthwith. On the other hand, if no fault is shown in the Administration's conclusions, the local representative makes the decision that the product should be refused entry, and notice is given to the importer over the signature of the Collector of Customs that the product must be exported or destroyed within ninety days.

Graduating Re-examination

Frequently an importer at the time of hearing asks that the detained importation be resampled and re-examined. The Administration has adopted the policy of granting re-examination if the importer is able to furnish proof by a reputable examiner that the Administration's results are non-representative of the parcel. No matter how careful examiners may be in drawing samples of products of non-uniform character, samples occasionally may not be representative of entire parcels. In such case of dispute, the Administration, having but one desire, viz., to determine the true condition of the goods, will agree to draw another sample of a fully representative nature, and if, after an exhaustive inquiry into the facts, it finds that the goods do comply with the law, there is no hesitancy in revising its conclusion. The resampling procedure which is granted in the interest of absolute fairness is not altogether understood by importing interests since requests are made frequently for re-examinations which are not accompanied by supporting data of a character to indicate probable error on the part of the Administration's operatives. Such requests for re-examinations are made apparently in the hope that possibly the Administration's second examination may show the commodity to be acceptable for importation. If re-examinations should be granted in each case without requiring supporting data of possible error, sacrifice of original work would follow, and such a course would result in the slowing up of the organization, and, therefore, in the interest of speed and considering that the Administration's original findings are carefully reached in each and every case, it has been decided that re-examinations will be granted only in cases where definite proof is furnished which will represent a substantial possibility that merchandise is of passable quality. The Administration, recognizing its responsibility, in the protection of the consumer has placed every safeguard humanly possible around its operations to prevent errors, but there do occur from time to time a few isolated instances where, because of non-uniform character of products, it is difficult to secure fully representative samples, and very occasionally instances where the defects of analytical methods result in erroneous conclusions as to the character of parcels of products which are being examined.

Method of Sampling

I may illustrate what I have in mind especially by referring to the very serious difficulty in securing representative samples of baled root drugs which are suspected of containing excessive soil. If an examiner opens a bale and draws out a single root, he will be unlikely to secure by this means a sample which will show the average soil or dirt content of the package. To permit of fair and representative sampling of such products Mr. L. J. Schwarz, the Administration's chief pharmacognocist in New York, has developed a special form of tubular auger tryer known as the Schwarz crude drug sampler, which is used by the Administration in sampling crude drugs of this nature to insure representative samples. This instrument removes cores of material directly through bales of such drugs.

Some crude drug materials arriving at ports of entry are found not to comply with the provisions of the Food and Drug Act for the reason that they are dirty, contain excessive foreign matter, such as stems, stones and leaves, or because they contain other removable adulterants. In such cases, when such commodities can be successfully cleaned, sorted, or reconditioned, conditional entries are allowed, it having been provided by regulation that the full intent of the law will be satisfied if before the entry is finally allowed, such materials are effectively cleaned, sorted, separated, or reconditioned. The

provision, however, has been made that all extraneous matter removed from such conditionally released products must be destroyed because experience has shown that if this refuse or rejected material is permitted to be exported, it may again be used for adulteration purposes. The Administration's representative decides whether such reconditioning as has been described can be successfully accomplished, and uniformly grants permission for such disposition of detained shipments when reconditioning or recleaning is possible.

Conditional Release

Other classes of drug materials not meeting the standards and not suitable for reconditioning may still have a legitimate technical non-drug use, and conditional releases may be granted providing for the effective denaturing of such goods so as to make their use impossible for any but a definite technical purpose. Likewise, some medicinal crude drugs, when slightly deficient in active principle, may, nevertheless, be suitable for use in the manufacture of standardized preparations, and some such products are released conditionally for this purpose. All such conditional releases as have been described are carefully controlled, and the conditions under which they are issued are specifically stated in each case and made a part of the obligations of the importer under his bond. The disposition of such released goods is, moreover, carefully supervised, and if and when a full compliance with such conditions of releases are not performed by the importer, then he becomes liable under his import bond and action is taken for recovery under the bond for failure to perform the obligations of such releases.

Conditional release is distinctly a privilege and is not a right under the law. The allowance of such releases to importers is based on the premise that the conditions imposed will always and uniformly be carried out in good faith by the importer accepting such conditions and agreeing with them. In the main, the products which are released conditionally are employed for proper and legitimate purposes, but we have met with instances where importers have pretended to reclean merchandise and have substituted other material for inspection, and in a few instances importers who have received merchandise under conditional release for sale only for specified purposes under qualifying labels have failed to so sell the goods. In such cases bond actions have been promptly and uniformly brought, and by this means such practices have been successfully discouraged.

There is no question but that the duties involved in the supervision of products released conditionally result in added cost and added effort, but after giving full weight to the advantages which include assurance of a continuous supply of needed crude drugs, as well as protection of American import interests, whose money is already tied up in the purchase of the merchandise when it reaches American ports, it is thought that the benefits more than overbalance the additional expense and work involved.

Recleaning and Sorting

It should be emphasized that when recleaning or sorting is permitted as a condition of release, insistence is placed upon removing as much as possible of the causative agent of the adulteration from the merchandise. It is not considered sufficient to remove an amount of the extraneous material which will just bring the commodity within the tolerance allowed for impurities. By this means and because of this fact, it frequently happens that products released conditionally are very much better after recleaning or conditioning than is the average quality of the product and much better than is required by the standards. If any question as to the success of proposed cleaning or conditioning operation arises, the importer is expected, if necessary, to make a small scale trial at cleaning to assure himself that the operation is going to be successful. The Administration expects and insists that reconditioning, recleaning, or sorting shall be successful in the first operation, and the responsibility for its success lies with the importer of record, and when analyses show failure to properly and effectively recondition, order of exportation or destruction follows.

In the case where the Station's final decision is that a product must be exported or destroyed, the importer has a right to appeal to the Chief of the District. The importer forwards his appeal to the Chief of the Station, together with the full statement of the facts on which he bases his appeal, and the entire case is then transmitted for review to the Chief of the District, who reaches a decision. If the decision is for exportation or destruction, the importer, if he so elects, may appeal to the Chief of the Food, Drug and Insecticide Administration, and, finally, to the Secretary of Agriculture. The field organization of the Administration is kept fully familiar with the Administration's rulings, precedents, and policies, and these representatives, therefore, make decisions, which, for the most part, represent the final action indicated. The rulings of the Administration's representatives in the field, therefore, are generally supported when appeals are made.

When a detention has been made the Collector of Customs issues a demand for the return of the merchandise to customs custody, but not until final decision is reached by the Station to require exportation or destruction does the Treasury Department actually require the return to customs custody of the merchandise in question. If, because of prior sale or distribution of detained merchandise, the importer cannot comply with the terms of the bond given for the return of the goods to customs custody, the full amount of his bond is then in jeopardy. As a matter of practice, the Treasury Department, upon inability of the importer to return the entire lot of merchandise to

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Typical still for recovery of crude camphor from chips of the camphor tree. These are located at many points throughout the mountains in Japan.

The Strength of Camphor

Residue of chips after the camphor has been distilled from them. These chips have yielded all the crude camphor that was in them and are of no further value.

AN apparent scarcity of spot and nearby arrivals of camphor has caused the first real firmness in this commodity in over three years and has created some anxiety in the minds of those who, through past experiences, are fully acquainted with the tricky trading methods of the Japanese on the products which they control. Among the traders in the local market great importance is attached to a fantastic rumor that the makers of lacquers for automobile finishing have become displeased with the German synthetic camphor which they have been using, and are swinging back to the Japanese natural camphor. This rumor goes even further, and a suit between an automobile manufacturer and a paint manufacturer involving lacquer, is hinted at. In some cases the cities in which the automobile maker and the paint maker are located, are named, and finally the names of the two companies involved in the suit are let fall. All of which makes a pretty story if one does not acquaint himself further with the facts.

There are three grades of natural camphor produced in Japan. The first, the crude, is all produced under Government monopoly and is not exported, the Government distributing this camphor among the refiners in Japan for production of the other two grades—the BB and the U. S. P. The BB camphor is a semi-refined camphor and enters this country under the classification of crude carrying one cent per pound duty. This is the grade used by celluloid manufacturers and is the grade with which the synthetic camphor competes. The synthetic camphor, however, carries a duty of six cents per pound as does the pharmaceutical variety.

It must be remembered that crude camphor is also produced in China, and American camphor refiners use this Chinese camphor as a base.

The monopoly system was inaugurated in Japan in 1903. Since that time all the various refiners, to whom the crude camphor is distributed, have consolidated into the Nippon Camphor Company with a capacity of 8,000,000 pounds of refined camphor per year if sufficient crude is available. The exporting of this camphor is handled by three export agents: Mitsui & Company, Takeda Gomei Kaisha, and Fujisawa & Co.

The price of camphor is set by the Nippon Camphor Company at Kobe, Japan, the port of shipment. Everybody who buys camphor pays the same price if they buy at the same time. Therefore, there has been practically no price advantage in buying camphor from one dealer or another in this country. Occasionally, however, through buying heavily when the price in Japan is low, and also through advantages in purchasing foreign exchange, some dealers differ slightly in spot prices in this country.

Information to DRUG MARKETS from our correspondent in Japan, however, shows a steady decline in camphor production over in the past number of years, and particularly during 1927. The figures in pounds are:

	Crude	Refined
1922	5,837,777	4,621,600
1923	8,149,587	3,783,700
1924	7,872,519	4,865,200
1925	8,312,888	4,342,400
1926	5,623,211	3,902,200
1927	3,867,000	2,494,000

From these figures it can be seen that curtailment during the past two years has been very sharp and

A view of the cooler or condenser which is immediately removed from the camphor still, and which condenses the camphor into solid form.

A camphor tree which is being chipped. The tree is in a lying position and the workers sit on the tree while cutting the chips.

Another view of a cooler or condenser.

that production must be more nearly on a balance with consumption than in former years.

Imports of camphor into this country as shown by the Government import figures point to the fact that both the crude and refined grades of Japanese camphor have lost ground within recent years, while the synthetic product has gained sharply. Imports are in pounds:

	Crude	Refined	Synthetic
1922	2,453,501	2,502,741	17,857
1923	3,640,812	3,240,322	488,684
1924	1,862,518	2,112,065	682,035
1925	2,369,413	1,583,902	1,834,988
1926	2,018,971	1,104,117	2,869,562
1927	1,689,714	1,480,851	2,933,784

In reading the import figures it must be remembered that some of the crude camphor comes from China to be refined in this country, so that only part of the crude camphor comes from Japan. However, all the refined material is of Japanese origin, and practically all of the synthetic camphor is of German origin.

The United States is the principal importer of Japanese camphor, and demand in this country has a very marked influence upon the price quoted in Japan. Consequently, according to our Japanese correspondent, the frequent reductions in prices at Kobe were the result of the lower market prevailing in this country. The latest reduction was made in January this year, when the Japanese Government lowered the price of crude camphor to yen 99 per 133 1-3 pounds, from the price of yen 119 per 133 1-3 pounds which prevailed since January 1927. Prior to the price named in January 1927, a quotation of yen 140 had prevailed since August 1926, and prior to this the price had been yen 170. So in less than two years the price has almost been cut in half.

The exports of camphor from Japan to the various countries during the past three years, in pounds, were as follows:

	1927	1926	1925
U. S.	2,024,526	1,807,200	1,989,600
England	371,735	252,133	516,267
Germany	341,910	123,860	321,067
India	873,278	980,533	813,333
Austria	170,240	128,933	107,700
France	294,595	380,533	422,600
Other	816,055	364,400	415,033
Total	4,942,339	3,937,592	4,585,600

From an analysis of the above figures, it will be seen that for the past three years production in Japan has been curtailed very sharply. The total of the crude and refined camphor produced in Japan has dropped from 12,665,288 pounds in 1925, to 9,525,411 in 1926, and to 6,361,000 in 1927. Thus within three years production has been cut by one-half. World exports on the other hand showed only a slight decline in 1926 compared with 1925, and a gain in 1927 over the two previous years.

So, with the demand for camphor in Japan for its own camphor consuming industry, it appears more than probable that the steady consumption and the sharply curtailed production has caused the large stocks to disappear. Therefore, we find that the Japanese camphor industry is for the first time in many years on a well balanced production and consumption schedule.

This condition is, in fact, the basis of the present strength, and not any shift from synthetic camphor to natural camphor for lacquers or anything else. In the first place camphor has not been used in nitro-

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Wholesalers *through* Six Generations *as told by* William J. Schieffelin, Jr.

Jacob Schieffelin, the founder, and one of the warehouses of the company established in 1805.

TEN years after the last soldier of King George III had left the soil of the then independent thirteen colonies, the name of Schieffelin first became associated with the drug business. It was 1794, and Washington had entered into the second year of his second term as president of a struggling republic. Failing as yet to grasp the significance of their new relationship, the thirteen states were fighting with each other a battle of commercial supremacy more fierce and exhausting than had been their recent struggle with the king. Fortunately for the economic future of the country, John Jay, in spite of public disapproval, had concluded a commercial treaty with England, thereby giving the first impetus toAmerican commerce. It was at this time that the firm of Lawrence and Schieffelin was formed, thus beginning the history of the house which today is designated by the name of Schieffelin and Company.

The new enterprise was partly the continuance of a drug business established in 1781 by Effingham Lawrence, brother-in-law of Jacob Schieffelin, the third of that name in America and the founder of the drug house. In 1794, Jacob Schieffelin purchased his brother-in-law's interest and entered into partnership with John B. Lawrence, brother of the original owner. The new firm did business under the name of Lawrence and Schieffelin, at 195 Pearl Street, opposite what was then called the Fly Market, at the foot of Maiden Lane.

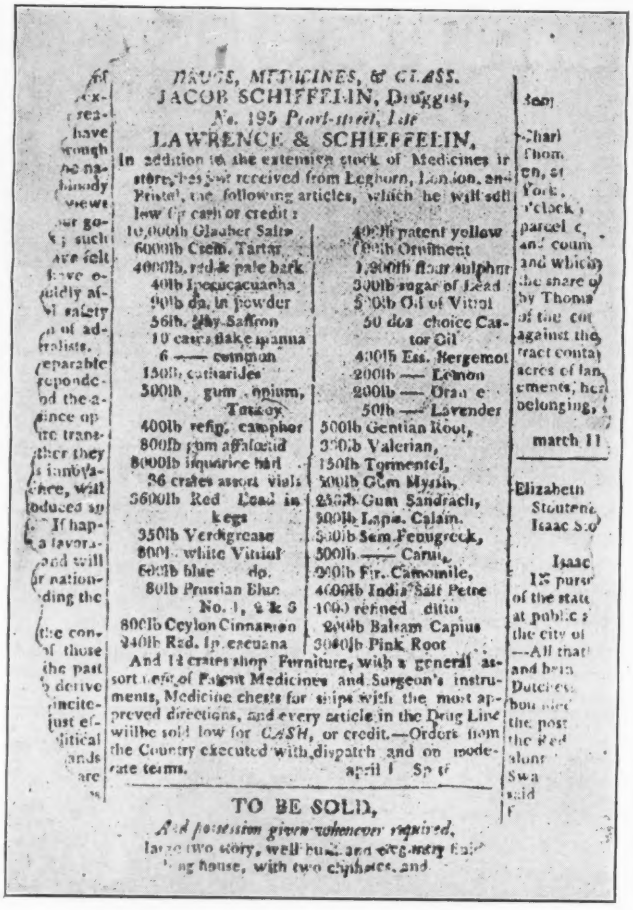
The new building facing Cooper Square, New York, to which Schieffelin & Company will move after seventy-five years at William and Beekman streets.

For five years the partnership prospered. Not content with the prospects of a slow growth as a purveyor of drugs, Jacob Schieffelin, with characteristic enterprise, entered into the shipping business so that the firm might carry on a foreign trade and import its own drugs and chemicals. This venture also proved successful for a time, the first cargo netting the owners $25,000. But shipping in those days became increasingly dangerous as England and Napoleon each attempted a blockade of the

world's ports. Lawrence, apparently, never approved of his partner's venturesome undertakings so that when several voyages failed due to capture of the vessels, he withdrew from the partnership. Thus the opening of the nineteenth century found Jacob Schieffelin doing business alone, under his own name.

Meanwhile, his son, Henry Hamilton Schieffelin, had graduated from college and entered into the law profession in the office of Cadwallader Colden. In 1805, as the drug business grew, Jacob took his son into partnership and the firm became Jacob Schieffelin & Son.

The volume of business carried on by the firm was very heavy and extremely varied in nature. In addition to the home office, which was still at 195 Pearl Street, the firm had several buildings which were used as warehouses. Files of old papers show that they advertised largely, and that they did not confine their attention wholly to drugs. An advertisement offers for sale "Muscavado sugars," "coffee in hogsheads" and "a shipment of cotton, just received from Guadaloupe." Also, "just received from London, per Oneida Chief, one hundred barrels double refined saltpetre." They also advertise for export three hundred barrels gunpowder and four hundred casks brimstone. Such quantities were unusually large for a merchant of that period.



DRUGS, MEDICINES, & GLASS.
JACOB SCHIEFFELIN, Druggist,
No. 195 Pearl-street, late
LAWRENCE & SCHIEFFELIN,
In addition to the extensive stock of Medicines in store, has just received from Leghorn, London, and Bristol, the following articles, which he will sell low for cash or credit:

10,000lb Glauber Salts	400lb patent yellow
6000lb Cream Tartar	100lb Ornament
4000lb. red & pale bark	1,200lb flour sulphur
40lb Ipecacuanha	300lb sugar of Lead
90lb do. in powder	500lb Oil of Vitriol
56lb. Bay Saffron	50 doz choice Castor Oil
10 cases Bake manna	400lb Ess. Bergemot
6 —— common	200lb —— Lemon
150lb. cantharides	200lb —— Orange
500lb. gum opium, Turkey	50lb —— Lavender
400lb refig. camphor	500lb Gentian Root,
800lb gum assafœtid	300lb Valerian,
8000lb liquorice ball	150lb Turmentel,
36 crates assort vials	200lb Gum Myrrh,
56000lb Red Lead in kegs	250lb Gum Sandrach,
350lb Verdigrease	300lb Lapis. Calain.
800lb. white Vitriol	500lb Sem. Fenugreek,
600lb blue do.	500lb —— Carui,
80lb Prussian Blue No. 1, 2 & 3	200lb Fir. Camomile,
800lb Ceylon Cinnamon	40000lb India Salt Petre
240lb Red. Ip. cacuana	1000 refined ditto
	200lb Balsam Capiva
	3000lb Pink Root

And 12 crates shop Furniture, with a general assortment of Patent Medicines and Surgeon's instruments, Medicine chests for ships with the most approved directions, and every article in the Drug Line willbe sold low for CASH, or credit.—Orders from the Country executed with dispatch and on moderate terms.
april 1 3m

TO BE SOLD,
And possession given whenever required,
large two story, well built and convenient brick dwelling house, with two cellars, and

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An advertisement of Jacob Schieffelin in "The Spectator," New York, April 11, 1801.

The prosperity enjoyed by the growing nation and the growing drug firm through western expansion into the Louisiana territory and improved methods of steam transportation, suddenly received a shock. English ships had been preying upon American commerce and, rather than suffer an embargo, the country went to war. Shipping was still the most vital part of the business of Schieffelin & Son. Consequently any war which centered about shipping, as did the War of 1812, was bound to be felt severely by the firm. But its roots were firmly established and it weathered the storm although two of its ships had been seized by order of Napoleon at Amsterdam, and another by the English in the West Indies. As indemnity for these losses, $10,000 was received from France and nothing from England.

In 1814, the war being over, but peace not yet declared, Jacob Schieffelin retired from business, leaving the management of affairs to his son, Henry Hamilton. The other partners were his brothers Effingham and Jacob, Jr., and the firm's name changed to H. H. Schieffelin & Co., in which form it continued for thirty-five years.

Following the depression left by the war, a steadily increasing prosperity was felt locally and nationally. Finding no relief from its growing pains, the young nation was continually pushing westward. In New York, daily newspapers were being established and losing the uncouthness of its younger days, the city was interesting itself in public works and welfare. The climax was reached by the completion of the Erie Canal in 1825. Meanwhile, the drug firm under the leadership of Henry H. Schieffelin had outgrown the capacities of its original and historic home in Pearl Street. It had moved around the corner into Maiden Lane, a street which next to Broadway was among the oldest of those of New Amsterdam.

Then in quick succession followed two calamities which from present day perspective are seen in their true light as spurs to further progress. These were the fire of 1835 and the panic of 1837. Although dire results followed immediately in their wake, the first necessitated the rebuilding of most of lower New York City, which was greatly needed, and the second resulted in the establishment of the sub-treasury system. That the firm not only withstood the shock of these twin catastrophes but emerged superior to them, is shown by the fact that in 1841 it moved into yet larger quarters at 104 John Street. In 1848 the

Four generations of the heads of the business. Standing is Samuel B. Schieffelin, the grandson of Jacob Schieffelin, the founder of the business. Seated at the right is William H. Schieffelin, son of Samuel B., and seated at the left is William Jay Schieffelin, present chairman of the board of directors; and on his knee is William Jay Schieffelin Jr., the present president of the company.

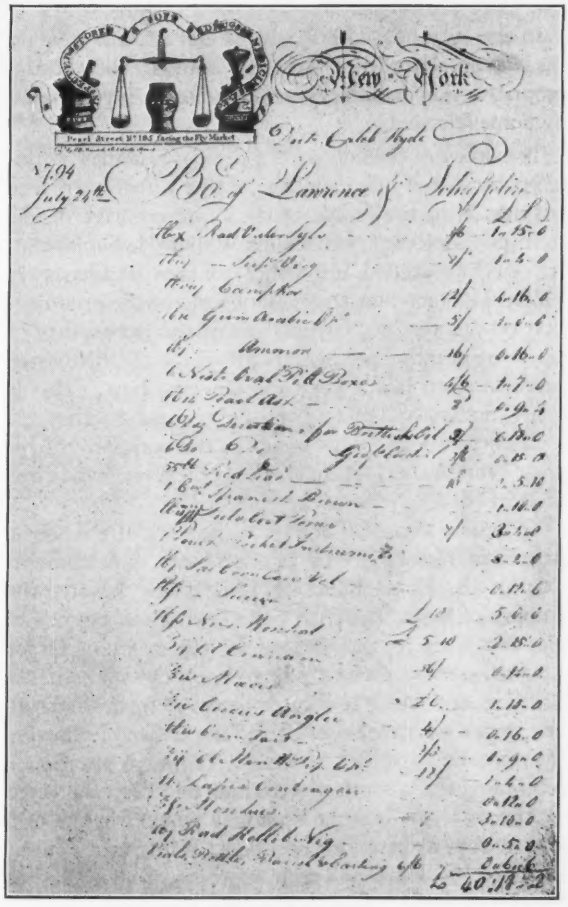
firm purchased the merchandise of Hoadley, Phelps & Co. and absorbed their extensive business. The following year, Henry H. Schieffelin retired from active participation, leaving four of his sons—Samuel Bradhurst, Sidney Augustus, James Lawrence and Bradhurst Schieffelin—to carry on the business under the name of Schieffelin Brothers & Co.

Of the four brothers, Samuel B. Schieffelin had chief direction of affairs during the sixteen year period which followed. Transportation and communication were now making rapid strides, stimulated by the discovery of gold in California. Railroads were pushing their way across the country; the still famous American clippers were speeding across the seven seas; and the final steps were being made in telegraphic communication. The effect of the welter of prosperity which was sweeping the country soon became apparent in the affairs of Schieffelin Brothers & Co. In 1853, Asher F. Randolph, and in 1855, John D. Dix, became members of the firm. In 1854 increased growth of the business made necessary another removal into larger quarters at 170 William Street, which building the firm occupies to-day. Coincident with this removal, a druggists' sundries department was established, the first step of its kind to be made in the trade. The firm was also the first to bring petroleum into New York City as an article of commerce.

In 1859 William H. Schieffelin, the son of Samuel B. Schieffelin, William A. Gellatly and Joseph H. Westerfield were admitted into partnership.

The Civil War which followed soon after affected the business of the house for a time. Not only were all connections with the South suddenly broken off, and the course of trade in these directions closed up, but it also involved the suspension of many outstanding accounts, and the entire loss of some of them. Soon, however, new avenues of trade were opened up and with characteristic vitality the firm continued to expand.

In 1865, with the end of the war, a change in the firm again occurred. The four brothers retired and the firm became W. H. Schieffelin & Co., the partners being William H. Schieffelin, William A. Gellatly, Joseph H. Westerfield, and William N. Clark. From that time until the contemporary era which began in 1903, the firm continued in this manner. In 1875 the concern bought the stock and absorbed the business of A. B. Sands & Co. Five years later William S. Mersereau and William L. Brower became partners;


New York

Caleb Hyde

1794 July 24th Bo of Lawrence & Schieffelin

Bill of Lawrence & Schieffelin rendered to Caleb Hyde, July 24, 1794. The bill was rendered in Sterling.

and in 1890 William Jay Schieffelin and Henry Schieffelin Clark were admitted into partnership.

For the proper manufacture of its chemical and pharmaceutical preparations, the firm in 1882 established a laboratory, and two years later erected a new building, with modern equipment to house the manufacturing branch of the business. The house was among the first to exploit the valuable synthetic remedies of modern chemistry, through its foreign connection with the Farbenfabriken of Germany. During this period also, agencies were established in Chicago and San Francisco as well as in London, England.

Firm Incorporates in 1903

In 1903, the house was incorporated as Schieffelin & Co., with W. N. Clark, a grandson of Henry H. Schieffelin, as president. Three years later, after fifty-seven years' connection with the house, Mr. Clark retired and William Jay Schieffelin was elected his successor. Under his leadership the firm was carried through that period of European turmoil which culminated in the world war and well into the reconstruction period which followed.

In 1917 the stock and business of Bruen, Ritchey & Co. was taken over and a few years later the same was done with the business of Britt, Loeffler & Weil.

In the autumn of 1925, when Lehn & Fink gave up the wholesale part of their business, their drug, proprietary and sundry merchandise was purchased by Schieffelin & Co.

The story of Schieffelin & Co. now becomes a contemporary one. To-day, the active direction of the business is in the hands of the representative of the sixth generation of Schieffelins, William J. Schieffelin, Jr., who succeeded his father to the presidency in 1922. The fact that the present head of the organization retains distinct impressions of the personality of his great-grandfather has always made the history of America seem like a very short one to him. This is easily understandable upon the realization that, as a child, he spent many hours in the company of his great-grandfather, Samuel B. Schieffelin, who was born in 1812.

To others also, still active in the work of the house, American history seems but a recent development. During the Draft Riots of 1863 a boy entered the employ of what was then Schieffelin Brothers & Co. He was born in the shadow of the spire of Grace Church, on the present site of the new Wanamaker building and but a few yards removed from what will be the newest location of Schieffelin & Co. Following the war, he travelled extensively through the South rebuilding those connections which had been shattered by the war. In 1880 he became a partner in the firm and to-day, as first vice-president, William L. Brower is found at his desk each morning, punctually at quarter to nine, ready to begin the day's work.

Another well-known figure among the retail druggists of New York City is that of James M. Gray, the present manager of city sales, who celebrated his fiftieth anniversary with the house of Schieffelin in 1925. There are a number of others who have spent in the neighborhood of half a century in the service of the company, contributing further evidence as to the stability and continuity of this wholesale drug business.

Another Change Will Be Made

To-day, the company is on the verge of another and most drastic change in location, again made necessary by increased business. This summer it will move into new quarters at 16-25 Cooper Square, where it will have the advantage of more than twice the floor space which it now possesses.

In 1928 as in 1794, the house of Schieffelin continues the business established by Jacob Schieffelin. This combination of one hundred and thirty-four years of business experience with a direct descendant of the founder always at its head is probable, unique in the drug trade and finds but few equals in business of any sort. Now in the second quarter of its second hundred years, this old-established drug house stands to-day in utter denial of the "shirtsleeve to shirtsleeve in three generations' adage and with justifiable confidence in its traditions and policies plans to carry them on into the future.

Mouth Infection Research

Recent dental researches have kept B. acidophilus in the foreground. Because of the many data pointing to B. acidophilus as an etiological factor in caries, and with the growing interest in the use of autogenous vaccines in focal infections, an investigation has been conducted by Victor Ross, Frances Krasnow, and Jerome Samet, of Plant Research Laboratories, Lehn & Fink, Inc.; and the Laboratory of Biological Chemistry of Columbia University, to ascertain whether the saliva and blood serum of rabbits inoculated with dead B. acidophilus oragnisms would contain any immune body specific for this germ.

The conclusions arrived at by the investigators are as follows:

(1) Sera from fourteen of a total of eighteen rabbits, inoculated with dead B. acidophilus, showed agglutination to a greater or less degree.

(2) Saliva from these rabbits bore agglutinations in 7 of 14 cases. The titre was much weaker than that of the sera, and the observed agglutination was very slight.

(3) Cross agglutinations for two different strains were present.

(4) Should the existing data for the belief that B. acidophilus is an etiological factor in dental caries be substantiated, the present experiments would appear to add some degree of experimental evidence in favor of attempts at vaccine prophylaxis and treatment.

Preserving Pharmaceuticals with COLORED GLASS

By Dr. William J. Husa

Professor of Pharmacy, University of Florida

In this article, Dr. Husa reviews the extent of present knowledge on a subject that is receiving active attention from the drug manufacturing industry, and suggests the paths that research should take to develop a more comprehensive understanding.

IN recent years much progress has been made by chemists and physicists in theoretical studies on the effect of light on chemical reactions. Much scientific information has been gained through these investigations in pure science and the time is ripe for corresponding advances in the practical application to problems of pharmacy.

An ever present manufacturing problem is the choice of a container most advantageous from the standpoint of beauty, utility, cost and proper protection of each individual product. In cases in which decomposition is hastened by light, consideration must be given to shutting out the deleterious light rays. In this respect, glass, which possesses so many valuable properties, is at a marked disadvantage when compared with other materials such as tinned iron, wood, cardboard and stoneware. The latter materials may be said to be 100 per cent. efficient in shutting out light, and each has properties which make it a valuable in certain cases, particularly for solids. However, no material can challenge glass as the best all around container material for liquids, despite its recognized disadvantage for the preservation of pharmaceuticals, due to its transparency.

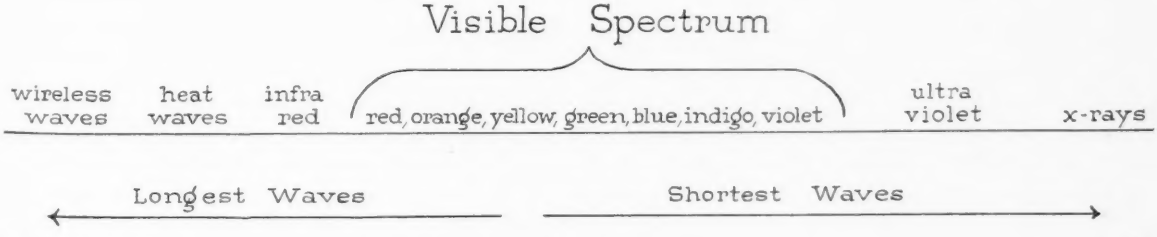
Amber colored glass and other special glasses which have the property of shutting out certain portions of the light has had much application in pharmacy and in other fields. The development of special glasses for pharmaceutical use is an important project which should receive much attention in the near future from pharmaceutical interests and the glass manufacturing industry.

Before discussing in detail the effects of colored glass, it will be well to recall briefly the nature of light and some of its properties important in the present discussion.

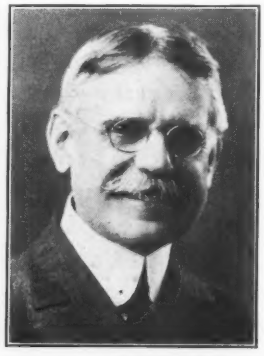
As illustrated by the rainbow, white light may be separated into more or less definite bands of red, orange, yellow, green, blue, indigo and violet. In 1666 Sir Isaac Newton carried out experiments on the decomposition of white light by a prism and gave the name "spectrum" to the colored bands thus obtained.

The two important and to a certain extent contradictory theories of the nature of light are known as the corpuscular and wave theories. The corpuscular theory, which was established by Newton, regarded light as made up of minute particles shot off by all bodies which radiate light or heat. Newton considered the red rays to be the largest particles and the violet rays the smallest. These particles were thought to produce their effect upon impact.

Diagram Illustrating the More Important Waves



The corpuscular theory held sway from Newton's time until about 1800, when it was discarded in favor of the wave theory, which considers light to be composed of waves of different length, the red rays being the longest and the violet rays the shortest. The names of Huygens, Young and Fresnel are inseparably linked with the early development of the wave theory. The facts of interference could not be explained in terms of the corpuscular theory, but were readily understandable in terms of the wave theory; hence the corpuscular theory was discarded. Since we cannot imagine wave motion without a medium for the waves to travel in, it became necessary to postulate the existence of an "ether," possessing no mass, but pervading all matter and space.



Dr. H. V. Arny, Chairman of Committee of American Pharmaceutical Association to investigate colored glass as a preservative.

In recent years, certain facts about light have been discovered which are difficult to understand in terms of the ether wave theory but may be satisfactorily explained by the corpuscular theory. Thus, after more than a century, the corpuscular theory has appeared once more as a working hypothesis. However, the old objections to a corpuscular theory are still valid, and some of the foremost physicists of the world are now working to reconcile the two divergent theories, each of which appears to contain part of the truth.

Calculating Wave Length

The first calculations of the wave length of light were made by Young, who used data from experiments by Newton. The wave lengths of visible light range from 0.0007 mm. for red at one end of the color spectrum to 0.0004 mm. at the violet end. Newton recognized only those waves which, when falling upon the yee, produce the sensation of light. The longest waves that affect our sense of sight produce the sensation of red and have a wave length of about 0.0007 mm., while the shortest waves cause the sensation of violet and have a wave length of about 0.0004 mm. In between these limits are the various intermediate wave lengths, corresponding to various shades of color ranging from the deepest red, through orange, yellow, green, blue, to the darkest violet.

Since the time of Newton it has been discovered that there is an enormous extent of invisible rays lying beyond the red at one end of the spectrum and beyond the violet on the other. These rays consist of waves which are identical with the visible waves in general properties, but do not produce the sensation of light when falling upon the eye, although some of them are injurious to the eye.

The discovery of these invisible waves has only come a little at a time. In 1800 Sir Wm. Herschel placed the bulb of a sensitive thermometer on a spectrum obtained from the sun by a prism and found that the thermometer indicated a rise in temperature. The red end of the spectrum gave the greatest increase in temperature and the violet end gave the least. When the thermometer bulb was held beyond the violet end of the spectrum no effect was observed but beyond the red end there was an increase in temperature. The existence of invisible heat rays known as infra-red rays was thus demonstrated.

Every source of light gives out invisible heat rays as well as visible light and every hot body gives out heat rays. A kettle of boiling water gives out heat rays of wave length 0.008 mm., while the human body gives out heat rays of wave length near 0.009 mm. The longest heat waves measured thus far have a wave length of 0.107 mm. Similar waves of longer wave length are the electromagnetic waves familiar from their use in the radio field. Such waves are known ranging from a wave length of 1.6 mm. up to hundreds of kilometers.

In 1801 Ritter discovered that the darkening of silver chloride by light did not stop at the violet end of the spectrum, but was greatest beyond the violet end of the visible spectrum. This result showed that there were invisible rays beyond the violet end of the spectrum. Herschel introduced the name actinic rays for the rays that produced chemical change. The region of the spectrum beyond the violet is known as the ultra-violet. Wave lengths as short as 0.00002 mm. have been studied. The shortest wave lengths found in sunlight are about 0.0003 mm., the earth's atmosphere absorbing all shorter radiations. To secure spectra containing shorter waves, the electric spark or electric arc may be used.

Fitzgerald Dunning, of Hynson, Westcott & Dunning, serving on Dr. Arny's Committee.

Beyond a gap which has not yet been studied, there are the X-rays discovered by Rontgen at Wurzburg in 1895. These have a wave length which is one five-thousandth of the wave length of yellow light. Generally speaking, the chemical activity of rays increases as the wave length decreases. The extremely short waves offer a valuable new tool for bringing about chemical change but in the present discussion they are not of importance since we are interested primarily in the protection of pharmaceuticals from the effects of the light rays found in sunlight.

Since ordinary glass absorbs the shorter ultra-violet light and the longer infra-red, it is clear that any decomposition by light of materials in glass

bottles must be caused by visible light or by those portions of infra-red and ultra-violet which are nearest in wave length to visible light. The extremely active ultra-violet light of short wave length, commonly known as the "far ultra-violet" is not able to reach the material in the glass bottle as such wave lengths are absorbed by the earth's atmosphere, and some of the shortest rays which get through the atmosphere are absorbed by the glass. In fact, efforts have been made to devise new kinds of glass for window panes, since ordinary glass absorbs most of the health-giving ultra-violet rays. Ordinary glass is transparent to the shorter infra-red rays, but is opaque to the longer heat rays. However, the still longer "wireless" waves are readily able to pass through bodies which are opaque to light and heat waves. Even buildings present no obstacle to "wireless" waves; however, such waves have no known effect on chemical changes.

Value of Colored Glass

The value of colored glass for containers for pharmaceuticals lies in its power of absorbing some of the visible light, near infra-red or near ultra-violet which passes through ordinary glass and hastens decomposition. Amber glass absorbs the ultra-violet and some of the visible spectrum. Amber colored glass is the only colored glass which is widely used for bottles for pharmaceutical products. The U. S. P. and N. F. in cases too numerous to mention recommend the storage of products in either amber colored or dark amber colored glass but in no case is glass of any other color recommended by these two authoritative works. Recently the thought has been expressed that pharmacists have blindly placed too much reliance in amber glass and that very likely it is not as efficient in the protection of pharmaceuticals from light as many have thought. Since the U. S. P. and N. F. sometimes direct the storage of preparations in amber colored bottles protected from light, it may be inferred that the amber glass in itself was not thought to give sufficient protection in such cases.

At the Philadelphia meeting of the American Pharmaceutical Association in 1926 the deterioration of pharmaceuticals by light rays was discussed by the Section on Practical Pharmacy and Dispensing. As a result, a committee on glass standardization and the relation of glass to the preservation of pharmaceutical preparations was appointed, consisting of H. V. Arny of New York, I. A. Becker of Chicago and Fitzgerald Dunning of Baltimore. Quoting from the report of this committee presented at the St. Louis meeting of the A. Ph. A. in 1927, the following are some of the general principles which have guided this committee thus far in its work:

1. "While it is generally accepted that amber glass is the proper type of glass for delicate chemicals we take the protecting value of such glass too much for granted.
2. The mere fact that a certain glass is colored yellow does not necessarily indicate that such glass will give adequate protection against the actinic action of day-light and other sources of light.
3. Our committee should therefore investigate the light-protecting properties of various types of glass containers; not merely those made of amber glass but also those of other colors.
4. The study should also include the amount of protection afforded or deterioration produced by light rays from ultra-violet and infra-red regions of the spectrum.
5. The field is too vast to be satisfactorily solved by a committee of three. That we must obtain the co-operation of other research agencies goes without saying.
6. One of our first tasks will be to get some information as to work already performed or being carried out by these other research agencies. In short, the preparation of a bibliography of work of this character is our first obligation."

The Glass Container Association, through its research laboratory, is co-operating in the important work undertaken by this committee. The American Drug Manufacturers' Association and the American Pharmaceutical Manufacturers' Association have shown interest in the project and it is to be hoped that these associations will render active assistance to the committee. Manifestly the deterioration of medicinals through the action of light is of great importance to these manufacturing groups.

Quoting again from the report of the committee: "Your committee believes that the next work that should be performed represents problems in pure physics such as:

1. "What types of glass are theorectially best adapted to hold back the rays influencing the deterioration of medicinal chemicals and pharmaceuticals ?
2. Are recipes for such glass mixes available to the members of the Glass Container Association ?
3. Can such containers be purchased by chemical and pharmaceutical manufacturers at reasonable prices; or rather at prices that are not prohibitive to the ultimate consumer ?
4. The United States Pharmacopoeia and the National Formulary list 423 chemicals and pharmaceuticals that experience has shown are sensitive to light . . . Assuming that problems one to three are solved by physicists and that the physicists' findings are put into practical shape by the Research Laboratory of the Glass Container Association, then the individual medicaments mentioned above can be studied within the containers deemed theoretically satisfactory by such members of our other groups who have promised their co-operation."

As has been stated above, ordinary glass absorbs the shorter ultra-violet light and the longer infra-red. Colored glass also absorbs part of the visible spectrum. Thus a piece of red glass is opaque to all visible waves except those which produce the sensation of red. Such opacity is due to the fact that some of the light waves which fall upon the glass do not pass through it; they are either reflected back from it or are absorbed by it. When light waves are absorbed by glass the energy of the waves is distributed among the molecules of the glass and causes a slight rise in temperature.

The familiar blue cobalt glass absorbs certain waves in the visible spectrum. The absorption varies with the perecentage of cobalt in the glass and with the thickness of the glass. Variations in the other ingredients of the cobalt glass also affect the absorption.

Although it has been found by experience that amber glass bottles are better than ordinary glass bottles for the preservation of many pharmaceuticals, it is probably erroneous, however, to conclude from this that amber glass is best in all cases. Recent studies have emphasized the fact that photochemical reactions usually are sensitive to a comparatively narrow band in the spectrum. In other words, decomposition of a substance may be hastened only by light waves of a certain wave length, and this wave length may vary for different substances. It may thus be understood why a certain glass might be effective in the preservation of one compound and might have no effect whatever in some other case.

Method for Research

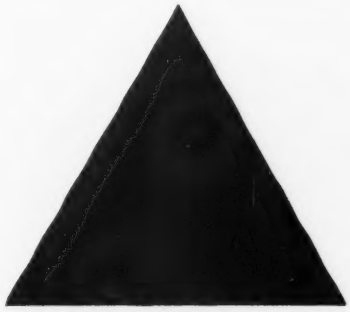
Theoretically, the correct procedure would be to study the deterioration of each pharmaceutical, and find out the wave length of light which hastened the decomposition. The experience of research workers in glass technology has abundantly demonstrated that it would then be possible to produce a glass which would keep out the light waves which were not wanted. This problem is analogous to the use of a red light in photographic work; in which case the red glass transmits the longer wave lengths of visible light, sufficient for the vision of the operator, and at the same time keeps out the shorter wave lengths which would affect the photographic plate or film. Furthermore we now have "anti-fade" glass which cuts off the ultra-violet light, and we also have "vitaglass" and other similar glasses which transmit the ultra-violet light. It is thus not an idle dream to say that the time is at hand when we should have a special glass or a number or special glasses developed for pharmaceutical purposes.

From the pharmaceutical standpoint, the problem of choosing a suitable colored glass could be approached in one of two ways. One method would be to store a pharmaceutical in bottles of different kinds of glass, and thus determine the relative value of the various kinds of glass for the preservation of the particular substance studied. This method was discussed by the A. Ph. A. committee, in the report of which the following statement is made: "At the conference with the official of the Glass Container Laboratory that gentleman suggested immediate research work by the pharmaceutical group on the question of relative preservative value of amber glassware now on the market. His idea was that instead of awaiting the precise work of physicists, as outlined above, that we start right in with glass containers now available and with certain typical unstable products, such as spirit of ethyl nitrate, solution of silver nitrate, solution of physostigmine salicylate, santonin and other dry chemicals; each investigator taking up a specific product and conducting observations of a period of a year or more.

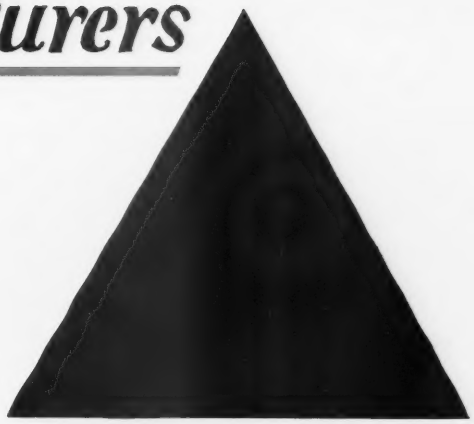
The other method would be to find out the wave length of light which hastened the deterioration of the drug, and then ask the glass technologist to produce a glass which will keep out light of this wave length. Since this procedure gives promise of valuable results to pharmacy, it will be in order at this time to give some further information on this method for the benefit of manufacturers and research workers who might find the opportunity for such studies on the particular pharmaceuticals in which they are especially interested. One procedure is to break up light by dispersion through a prism. A tube of the substance to be tested is then arranged behind a slit, and light of a particular wave length is allowed to fall upon the slit. By placing a number of tubes at various points on the spectrum, a comparison can then be made of the effect of various waves. Another procedure is based on the use of light filters, such as the Corning filters or Wratten filters, which are so constructed as to transmit only a certain portion of the spectrum. By use of a series of such filters, it is possible to find out what particular portion of the spectrum is deleterious to the particular substance being studied.

A disturbing factor enters into the problem when various glasses are compared. Since all glass is more or less soluble in water, sometimes giving the water an alkaline or acid reaction, the relative value of the glass for a container as observed will depend not only on its effect in keeping out light, but also on the solubility and composition of the glass. In the words of the A. Ph. A. committee, "When do certain constitutents of the glass-mix produce the deterioration we ascribe to light ?" This question is receiving consideration in connection with the deterioration of a pharmaceutical preparation which is being investigated under the author's direction at the College of Pharmacy of the University of Florida. It has occurred to the author that the difficulty mentioned may be circumvented by placing the substance in tubes and putting the tubes inside the bottles which are being compared. By using only one kind of tube, the chemical differences of the various glass bottles will be eliminated and the true value of each bottle

Pill Manufacturers



Showing approximate quantity of pills that one pound of ordinary chalk will coat



Showing approximate quantity of pills that one pound of X-L-P-C will coat.

Compare the Covering Power of X-L-P-C with other Chalks

We invite all pill and tablet manufacturers interested in lowering manufacturing costs to investigate Extra Light Precipitated Chalk. Comparative tests will prove that this domestic product gives more coverage per pound than other chalks offered, and consequently presents an opportunity to coat your pills and tablets with a quality chalk at a very minimum of cost.

Another point worthy of your consideration is the ease with which X-L-P-C may be consistently obtained. X-L-P-C is produced in our own plant at Piedmont, W. Va. Spot stocks are available in any of several strategetically located warehouses.

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More and Better Window Displays

The cost of securing window displays is one of the heaviest items in the growing cost of distributing merchandise. Competition for window space, as seen in increasingly beautiful display material, special offers, detail men, show clearly the decisive part success here may play in business building.

Does the *outward* appearance of *your product* help or hinder dealer acceptance of your window display material? The collapsible tube attracts as a convenient, sanitary package. But does the color, the design, the printing keep harmony with the high standard you have set for your display artwork?

Long experience has taught the A. H. Wirz, Inc., organization to make tubes which show a perfect register of true colors. And at your disposal is an organization glad to suggest colors, a design or a solution for any problems of tube design.

A. H. WIRZ, INC., CHESTER, PA.

Collapsible Tubes-Metal Sprinkler Tops

30 East 42nd Street, New York City — *Established 1850, Incorporated 1911* — 1251 E. 7th Street, Los Angeles — Railway Exchange Bldg., Chicago

as a light filter can be demonstrated. Other tests can be made in which the substance is placed directly into the bottles, and the effect of the ingredients of the glass mix may be determined. Since ordinary glass tubes cut out some of the light, it would be best to use quartz tubes, which would transmit practically all of the light that came through the bottle. The above procedure should make it possible to resolve the effect of a glass into two factors, i. e. the light factor and the composition factor.

Special Glasses Possible

The possibilities in the way of development of special glasses are indicated by the glasses developed for the protection of the eyes of workmen exposed to the rays of the oxyacetylene torch. The eyes require protection from intense light or glare, from ultra-violet radiation and from excess of heat rays. According to Coblentz and Emerson, the following kinds of glass are efficient against ultra-violet rays: black glass, amber glass, green glass, greenish yellow glass and red glass. For protection against infra-red rays, deep black, yellowish green and sage green glasses are of value.

When light falls upon a glass plate, not all of the light is transmitted through the glass. Part of the light is scattered by refraction, reflection and diffraction. According to Schott, the percentage of light loss on transmission through various glasses is: clear glass 5.5 per cent., etched glass 7.5 per cent. sand-blasted glass 11.2 per cent. and Jena milky glass 27.0 per cent.

Research work which has been done on signal glasses has produced data which are of value in connection with the development of a special glass for pharmaceutical use. Thus Zchimmer found that alumina diminished the relative transmission of blue light and to a less extent of green light in soda-lime-silicia glasses. Boric oxide diminished considerably the relative transmission of green and blue light in alkali-lime-silicia glasses; the substitution of calcium by zinc had a similar effect.

Cobalt-Blue Glass

It has been well known that cobalt-blue glass transmits ultra-violet light. However, Coblentz and Finn have recently produced a non-actinic cobalt-blue glass. This was accomplished by using cerium oxide for a part of the lime and adding a small quantity of cobalt oxide in an ordinary soda-lime glass. The fear has been expressed by some that the production of a special glass for bottles might be too expensive. However, the work of Coblentz and Finn indicates that slight changes in the composition of the glass mix may have marked effects on the properties of the glass in relation to the transmission of light. Accordingly it is quite possible that a slight change involving a minimum of expense might give a superior pharmaceutical glass.

It is quite evident that pharmaceutical manufacturers, and manufacturers of photographic chemicals and other delicate chemicals, would be greatly benefitted by any marked improvement in the protective power of glass containers. Through the co-operation of the pharmaceutical and glass manufacturing interests it should be possible to accomplish a great deal in the development of a special pharmaceutical glass. The A. Ph. A. committee, ably headed by Dr. Arny, is doing a great service in bringing together the groups whose joint efforts are necessary if success is to be attained.

Glandular Standards

Standards of glandular substances have not been generally adopted, states B. B. Grubb, president of Lafayette Pharmacal Co., Lafayette, Ind., in a communication to the American Pharmaceutical Manufacturers Association. Mr. Grubb has supplied a list of standards used by one of the foremost producers of glandular substances and also used by Lafayette Pharmacal Co. for their protection. The chances are, states Mr. Grubb, that these standards, with slight variations, will eventually be adopted by the A. M. Ph. A. for protection of its members. The members would, therefore, not offer lower or higher standards in competition with a low standard, and salesmen would be instructed to be careful about standards in their exploitation of products containing gland substances.

The list of standards supplied by Mr. Grubb follows:

Table of Standards

Unless otherwise stated, each grain of the substance named represents approximately the quantity of fresh gland stated in numerals opposite the name.

Amylopsin—Each grain converts 125 grains corn starch in thirty minutes under laboratory conditions.

Bile—Varies according to solids.

Brain—Fresh beef brain, 1-8 grain .

Corpus Luteum-Corpora Lutea, Cows Ovaries, 5 grains.

Duodenal. (Secretin)—Fresh Duodenal substance from the hog 8 grains.

Hemoglobin—Varies according to solids.

Kidney—Fresh Kidney, 1-5 grains.

Lecithin—90-95% pure.

Lymphatic—Fresh normal tissue, 1-7 grains.

Mammary—Fresh Sheep Mammary, 1-8 grains.

Orchic—Fresh Orchic glands, 1-7 grains.

Ovarian—Cows Ovaries, 1-6 grains.

Ox Gal—Entire Bile from beef.

Pancreas—Fresh tissue, 1-5 grains.

Pancreatin—U.S.P. standard.

Pituitary—Fresh normal whole body, 1-5 grains.

Placental—Fresh tissue, 7 grains.

(*Continued on page 229*)

The Wholesaler's *Survival*[*]

By O. H. Cheney

Vice-president, American Exchange Irving Trust Company

While giving the wholesaler a real beating for what he has failed to do to justify his existence, Mr. Cheney stresses the point that the wholesaler's cost is paid for in distribution no matter what method is employed. Thus chain store, direct to retailer, and direct to consumer methods of distribution do not eliminate any of the necessary functions.

THE question is not whether the wholesaler adds to the cost of distribution — of course he does — because distribution, like such elementary processes as walking, talking and sleeping, must cost something. The real question is, does the wholesaler add too much to the cost of distribution ?

When the factory has finished its job, there is a quantity of goods at a certain price. Before these goods can be of any use, they must be in the hands of consumers in small quantities and in thousands or hundreds of thousands of places. The shipment of small units of goods to a great number of consuming points is uneconomical — the preparation for shipment, the selling and the shipping cost so much on a small unit that the cost of distribution is too high for the value of the goods. That is the fundamental fallacy of "direct-from-factory-to-you" in a large proportion of cases.

Efficient and economical distribution requires that the logical succession of steps be logically taken. These essential functions cannot be performed more economically by a manufacturer or a retailer than by a wholesaler if the wholesaler is efficient. An efficient manufacturer or an efficient group of retailers can perform them more economically than an inefficient wholesaler. But in order to perform the traditional functions of the wholesaler, the manufacturers or retailers must in effect become wholesalers. And unless they are willing to give up their manufacturing or retailing profits in order to play at wholesaling for nothing, then they must add a wholesaling factor to the cost of distribution.

This simple and very difficult idea, also means that nobody, whether he calls himself manufacturer, jobber, agent, wholesaler, broker or retailer, has any rights or privileges regarding these functions. There is nothing in the Ten Commandments or the Constitution of the United States which says who is to perform which functions of distribution. And no legislation on earth, backed by the most profound economic research, can legally determine how these functions shall be divided.

Of these functions, the wholesaler has traditionally performed several which are essential. He has exercised buying judgment in deciding what goods and how much to buy to serve his trading area. He has stored them and financed them. He has sold them to retailers.

Two Basic Trends

If you study the hundreds of new trends and methods in merchandising, you will find that all of them arise from two basic trends. You will find that all the new competition troubles of the wholesaler, as well as of the manufacturer and retailer, came from either the pressure of goods to find enough outlets, or of outlets to find enough goods.

The producers or distributors of goods may seek certain outlets not only for volume, but also for rapidity of distribution, or directness, or quick release from responsibility, or low cost, or because they permit of better control — and in many cases volume or speed or any other advantage may be sacrificed for another which may seem more desirable.

The competition of outlets for goods to sell is just as complex and just as fierce. It would take more

[*]Extracted from Mr. Cheney's address before the National Wholesalers' Conference.

courage than I have to give a list of the things a drug-store sells or to predict what a cigar-store will sell to-morrow. Side by side with the minute subdivision of merchandising through specialty shops is the trend by which many diverse types of stores are becoming more and more identical and more and more like miniature department stores. A cigar-store owner who kicks because the drug-store is selling cigarettes, may retaliate by putting in a stock of shaving articles.

The same trends are working in wholesale distribution. Who can say what a hardware wholesaler is supposed to sell ? And yet the hardware wholesaler objects very strenuously to the growing habit of some drug wholesalers of carrying items which used to be sold through hardware stores only, but which have now invaded the ever-receptive drug-store. Whose fault is it ? Nobody's—it is simply the restlessness of the wholesaler — and of the manufacturer who is always seeking "new markets" and who has a simple faith that if he multiplied his outlets he can multiply his volume. The manufacturer does not seem to realize that there may be too many hardware wholesalers already and to encourage the drug wholesaler to go into the field he may be destroying the business of the very men whose business built his own business.

Changing Functions

Now, how do these two types of distributive pressure affect the wholesaler ? In general the wholesalers are affected in the same way as are the retailers and manufacturers — perhaps more so. These pressures force changes in functions — some new functions formerly performed by another branch are assumed; some functions are given up, and some functions are taken away by another branch. There is a constant redistribution of functions and there are no rules. Everybody grabs whatever functions he thinks will mean volume, profit or power and drops whatever functions seem to be a handicap or without which he can "get by."

We therefore find wholesalers who are becoming manufacturers and other wholesalers who are, directly or indirectly, operating retail stores. We find some wholesalers deciding they can get along without salesmen, thus becoming, in effect, mail-order wholesalers; and others who give up all service functions except warehousing, thus becoming "cash-and-carry" wholesalers. In the same way we have retailers assuming wholesale functions through group-buying, either co-operative buying as in groceries or through a resident buyer as in dry goods. And manufacturers also assume wholesale functions by cutting out the wholesaler and selling direct to the retailer through their own specialty salesmen.

The Weak Spot

Pressure always seeks the weak spot. The wholesaler must face the bitter truth that, in some measure, the growth and success of some merchandising methods which are tending to put him out of business, are due to his weakness. In losing his power he is paying the penalty for not keeping a big enough channel, for letting it become clogged and inefficient, and for allowing the walls to weaken and get leaky.

I shall discuss three general ways in which a large proportion of wholesalers have shirked their duty in the last few years — and for which many have had to pay the penalty with their business lives. These three developments are the chain stores, hand-to-mouth buying, and the increasing cost of distribution.

Chain Stores

Ask practically anybody over twelve years old what is the most significant trend in merchandising in the last few years and you will get the answer "chain stores." If the victim of your question happens to be a storekeeper or a wholesaler, don't wait around any longer. The newspapers fall over each other in the hurry to print the monthly record of sales of the different chains. The chart of growth of the chains looks like the picture of some dizzy unfinished sky-scraper. They are now estimated to be doing between ten and twelve per cent. of the business of the country. In spite of their magnitude and the growth of individual chains and the development of new chains, the chain store was well within the vision of any retailer and wholesaler years ago.

If the wholesaler had had any real conception of his essential place in distribution, which he is trying now to tell the world, he would have realized what the chain store meant to the retailer. If the wholesaler had been even selfish enough — thoughtfully selfish — he would have realized that it was the most effective self-defense to help the retailer meet chain competition. He knows that now, when the chains are powerful enough to cover the country, to go into importing and manufacturing, to combine with chains in other lines, to expand their territories and their fields in every direction. He is now feverishly devising co-operative plans to help himself by helping the retailer — but largely because he has discovered a new menace — the readiness of the retailer to help himself and to throw overboard the wholesaler who refused help in time of need. He has become solicitous of the retailer's welfare when the retailer has begun to co-operate in buying, or to make special buying arrangements which leave out the wholesaler.

Hand to Mouth Buying

After 1921 we discovered a new phenomenon in distribution — "hand-to-mouth buying." We didn't really discover it until about the end of 1925.

Particularly at the beginning of last year, hand-to-mouth buying was hailed as a revolutionary panacea for all our economic troubles. Business leaders and economists declared that hand-to-mouth buying, because it had kept down inventories and resulted in other beneficial conditions, was instituting a new economic era. Wholesalers and manufacturers were beginning to be convinced of the foolishness of their

antagonism. But too many profit and loss statements for 1927 show, I am sorry to say, that many of the expected benefits of hand-to-mouth buying have turned out to be quite the reverse.

It was the manufacturer who needed protection from possible evils resulting from hand-to-mouth buying and it was the duty of the wholesaler to give the utmost protection. There is no sentiment about this, because hand-to-mouth buying involves one of the traditional functions of wholesaling — the buying in quantities from the manufacturer and selling in smaller quantities to the retailer. Hand-to-mouth buying presented problems which are difficult but it was up to the wholesaler to solve them. What did the wholesaler do ? Most of them immediately gave up one of their most important functions and began to pass the buck — if the retailer bought piecemeal, why should they take chances ? They bought hand-to-mouth, too.

I am not saying that the wholesalers should have accepted the situation with docility and allowed the hand-to-mouth evil to grow at their expense. But they should have worked out concrete plans for picking out the wholesome elements of planned, orderly buying and, as vigoruosly as possible, putting a stop to the uneconomic and stupid elements which are also included in what is known as hand-to-mouth buying. And, above all, the wholesalers should have realized that hand-to-mouth buying was their problem —not something for the manufacturer to worry about. Working out an effective method of handling hand-to-mouth buying which had so much potentiality for economic good and evil, was not only a duty of the wholesalers but an opportunity for them. It was an unparalleled opportunity for them to prove the very things which they had been shouting so unconvincingly — that they had very essential functions in distribution and that they were particularly necessary to the manufacturer. If the wholesalers, as a group had met that opportunity and had made the great demonstration which was crying to be made, they would now be in a stronger position than they have ever before been in their history.

Rising Costs

The third failure of some wholesalers has been in dealing with an even broader trend. For years now the cost of distribution has been mounting — a higher and higher proportion of the selling price has come from the selling cost. And there has also been a rising volume of protest — first from consumers, then from primary producers like farmers, then from legislators and now from retailers. Again, I am not saying that there are not many powerful factors beyond the control of wholesalers — but if, wholesaling is an economical method of distribution should not the wholesalers have done their utmost to pull down on rising costs ? Instead of that they are at least partially responsible for some rising cost factors. They have tolerated and in some cases encouraged such developments as that of the "missionary salesman." The missionary salesman has no economic justification and exists only because of the intense and blind competition of manufacturers and because of the blind acquiescence of wholesalers and jobbers.

Such competitive methods as the use of missionary salesman and "demonstrators" mean that in many cases the same bill of goods is sold two or three times. They mean an endless multiplication of salesmen and salesmen's calls. From actual investigation it has been found that a small hardware dealer, in the $75,000 class, gets on an average of nearly five calls from salesmen per day and has to listen to them for more than one-fifth of his working day. No wonder that the retailers are protesting that they are paying too much for the privilege of being sold! And how about the consumer ? Competition may reduce the cost of production but so far in our economic history it has rarely, if ever, reduced the cost of distribution.

These three examples, which illustrate the wholesaler's duty to the retailer, to the manufacturer and to the consumer, bring up the question: What is a wholesaler ? To whom is the wholesaler's first duty ? Is a wholesaler the sales agent of the manufacturer or is he the purchasing agent of the retailer ? Or is he a merchant, buying and selling for his own profit ?

Whatever the answer, they will continue to perform the essential functions of wholesalers-buying, warehousing, financing and selling. Whatever their particular plan for keeping alive may be, they will succeed only in so far as they perform these functions efficiently. And in every one of these four functions improvement is generally possible because so many wholesalers have not yet adapted themselves to the multiplicity of trends in the new competition.

And service ? What economic crimes have been committed in the name of service! Some wholesalers have become so weary of demands for service that they have stopped all service. Others have not only given in to all demands but have practically thrust service down the throats of their customers. They have loosened credit terms, some have encouraged telephone ordering and parcel post delivery. An investigation of one wholesaler grocer, not unusual, revealed the fact that nearly half the orders were for less than $10 and totalled less than 15 per cent. of the volume; while orders under $5 increased from 16 per cent. in 1923 to 22 per cent. in 1927. Wholesalers are accepting and delivering an increasing proportion of orders so small that a respectable housewife would be ashamed to have her neighbor see them in her Saturday market basket.

Some Solutions

What can the wholesaler do ? He can try whining—begging for business—offering anything to get it—complaining continuously. At the other extreme he can try strong-arm methods—blacklisting, threatening manufacturers. He may try to do through his

association what he would never do alone. That is not what trade associations are for—they are for collective intelligence and collective courage, not for collective stupidity and collective cowardice.

He may decide to go into manufacturing and either build new plants or create new brands. How economic is that, with plant capacity already in excess in all lines and brands as numerous as the sands of the seashore ? But the integration of producing and distributing organization which are already in existence through buying up a plant or merging is economic—if it is properly planned and executued.

The wholesaler may decide to go into retailing by opening new stores. But how economic is it to add to the competition of retail outlets ? Again, integration with existing retailers is sounder. And this integration may take on many forms — it may range from a fairly loose arrangement by retailers to buy a certain proportion of their needs from one wholesaler to actual ownership of the stores by the wholesaler—and to actual ownership of the wholesaler by the stores — or any one of a number of profit-sharing co-operative plans in between. In carrying out these arrangements the wholesaler is teaching the retailer to become a better merchant—and learning, himself, some vital lessons. Helping the retailer with his advertising, his stock control, his store layout, his window displays, his clerk problems, his delivery problems — these are not merely service frills — they reach down to the very fundamentals of sound and efficient merchandising.

Some of these plans are bringing the wholesaler into direct competition with the existing chain store systems. The wholesaler who is operating or controlling a chain of retail stores is beginning, also, to learn something of the economics of competition. Soon, perhaps, he will discover that in some localities the chain-store idea is beginning to commit suicide, so there will be no need of witch-hanging expeditions which some wholesalers and retailers have been urging. In many cities the chains are fighting each other harder than they ever fought the independent—whether it is in bread wars or in service wars. In some cases the services of chain stores are increasing to such an extent that it is hard to tell a chain store from an independent. And with the low operating margins of the chains, how long can they keep it up ?

Nor are the broader economic advantages of group-buying and direct selling so clear. Whatever is done to simplify the distribution processes, the group-buyers must act as wholesalers and the direct-sellers must act as wholesalers. The chain systems must act as wholesalers — only a few days ago a big department store chain announced plans to build a new warehouse in the middle west at a cost of $2,500,000.

The cost of wholesaling cannot be eliminated — but it is up to the wholesaler to prove, by deeds, that because of experience and his existing facilities and his sincere striving for efficiency, he can perform the wholesaling functions at a lower cost. Many group-buyers will realize that paper profits do not always come true. Many manufacturers are learning that to their sorrow — more and more will learn that lesson and give up their expensive sales forces. Many manufacturers are learning that they tried to become national distributors too soon — that they made the wholesalers who served them faithfully the victims of a mania for nationwide business and big splashes of national advertising.

These economic lessons are painful for all and many are slow to learn. The manufacturer and the retailer —and the public—must be educated to the economics of wholesaling—if the wholesaler is really economical. But the education must be more than with words — otherwise the wholesaler is simply building himself a pavement of good intentions — and you know to where that leads.

Glandular Standards

(*Continued from page 225*)

Prostate—Fresh beef gland 1-6 grains.
Spleen—Fresh tissue, 1-5 grains.
Suprarenal—Sheep or ox, 1-5 grains.
Thymus–Fresh gland, 1-6 grains.
Thyroid—U.S.P. standard.

The average ratios of desiccated gland substances to fresh gland is found on page 152 in the 1926 Proceedings of the American Drug Manufacturers Association.

The ratios as adopted follow:

Brain Sub.	1:8
Corpus Luteum	1:5
Lymphatic	1:7
Kidney	1:5
Mammary	1:8
Orchic	1:7
Ovarian	1:6
Pancreas	1:5
Ovarian Residue	1:6
Parathyroid	1:10
Parotid	1:5
Pineal	1:6
Pituitary (entire gland)	1:5
Pituitary Anterior	1:5
Pituitary Posterior	1:6
Prostate	1:6
Submaxiliary	1:6
Spinal Cord	1:9
Spleen	1.5
Suprarenal (Standardized on Epinephrin Content)	1:5
Suprarenal Cortex	1:5
Suprarenal Medulla	1:6
Thymus (Calf)	1:6
Thyroid (U.S.P.) (Standardized on Iodine content)	1:5

{ *The Editor's Correspondence* }

Editor, DRUG MARKETS :

I was very much interested in reading the article captioned "Alcohol Under the Doran Plan" appearing in your February issue.

I think it sets forth the present status excellently, and the only exception I would take to it, is to the statement that molasses is necessarily a fluctuating raw material. In my opinion, there are possibilities of bringing about stabilization in that market as well as in the market for the finished product.

Yours very truly,
LESTER S. BACHRACH.

New York, N. Y., March 14, 1928.

NARCOTICS

National Situation To-day

By Col. L. G. Nutt

Deputy Prohibition Commissioner

CONSIDERATION of the narcotic drug traffic in this country to-day may properly first require a statement as to the number of persons addicted to the habitual use of such drugs, and second, a report as to the source of supply of the drugs so used. It must be understood in this connection that the drugs which are the subject of Federal control because of habit-forming effects exclusively include opium and derivatives thereof such as morphine and heroin, likewise coca leaves and its derivative, cocaine.

It would be difficult to obtain an absolutely correct census of the number of persons in the country actually addicted to the use of these drugs. Three official surveys have, however, recently been made which furnish a reasonably accurate estimate. One of these surveys was made by experts of the United States Public Health Service. The other two estimates were made by Federal narcotic field officers in charge of divisions of the country, such surveys having been made two years apart. The estimates so formulated indicate that at present there are approximately 100,000 narcotic addicts in the United States.

Despite the fact that those seeking to impose still more stringent laws on the drug manufacturing industry to control narcotics, would have us believe that there are 200,000 addicts in New York City alone. Commissioner Nutt gives a figure of 100,000 for the entire country. Also it is interesting to note that drugs for illicit use are practically all smuggled and constitute an industry of their own—one which is as entirely divorced from the drug manufacturing industry as cement is from carrots.

Most unofficial estimates which have been made of the number of narcotic addicts in the country have greatly exceeded this figure. Such estimates appear excessive. The minimum requirements of a morphine addict average about eight grains daily. Using the estimate of 100,000 addicts it will be found that about 420,000 ounces of morphine would be required annually by them. Morphine is the drug chiefly used for addiction purposes except in New York City and certain other vicinities, principally in the northeastern section of the country where the use of heroin is quite extensive. When cocaine is used it is usually in conjunction with morphine. Most persons using cocaine also use morphine, although not all persons who use morphine also use cocaine. The quality of cocaine illicitly used must, therefore, be added to the quantity of morphine and heroin used for addiction purposes to ascertain the total quantity of all manufactured narcotic drugs so used. Opium as a drug of addiction is used in this country only by smoking, and this habit is confined to a relatively few persons. Altogether, it is highly improbable that the quantity of morphine and other narcotic drugs in illicit hands which is disposed of annually in this country so far exceeds the probable total as to indicate a greater number of addicts.

Of the total quantity of narcotics used annually for illicit purposes in this country, practically none is of domestic manufacture. Nearly all drugs so used here are smuggled. They are manufactured in foreign countries. Very little morphine hydrochloride and no heroin are manufactured in the United States. Morphine found in illicit hands is invariably hydrochloride, the kind of morphine manufactured abroad. American manufacturers produce chiefly morphine

sulphate as the kind most desired here for medical purposes. No smoking opium is legally manufactured here.

The present system of control of the domestic manufacture of narcotic drugs and their distribution for medical purposes is such as to prevent any readily discernible diversion to illicit use. That the observance of the Harrison Narcotic Law by persons registered thereunder to import, manufacture, or distribute narcotic drugs for medical purposes has steadily improved is supported by statistics of convictions. In 1918, 22% of the persons convicted for violation of the Harrison Act were registered thereunder; in 1920, 15% of the number convicted were so registered; in 1927, only a slight fraction over 4% of the number convicted were registered under the Act. Of the 180 registered persons convicted in 1927 the total quantity of narcotic drugs diverted by them was insignificant in comparison to the quantity smuggled.

Court Trials Successful

From any possible viewpoint, therefore, it must be concluded that practically all narcotic drugs illicitly used here are smuggled.

Last year there were 4,458 persons convicted of violation of the Harrison Act, (with aggregate sentences of 7,088 years imposed) that number being 97.3% of the number of cases tried in United States courts, thereby indicating an almost perfect success in the trying of cases. In 1918 only 84.5% of the cases tried resulted in convictions which increased to 89.3% by 1922. There is every indication that the present high rate of success in trials will continue.

Smuggling and Peddling Methods and Prices

At least 85% of all smuggled drugs, other than smoking opium, is brought in at or near the port of New York. There is some occasional smuggling at other Atlantic coast and gulf points, also through the Mexican border. From Yew Nork distribution is effected by large dealers who sell and ship only to trusted dealers in other cities who in turn distribute to like smaller dealers, the supply in diminishing quantities eventually reaching the addict who is the consumer. The price paid for morphine illicitly in New York in large quantities is now as low as $11.00 or $12.00 per ounce. The price charged in Detorit and Chicago and other mid-western points is from $35.00 to $50.00 per ounce depending on the quantities sold. The price increases with extra handling and transportation. Illicit morphine has, however, been procurable in west coast cities for as low as $45.00 per ounce in 100-ounce quantities, such morphine not having been smuggled into the country on the Pacific coast, but having been brought from New York by land across the country. The price paid by the addict is about $1.00 per grain, which would amount to $436.50 per ounce. The addict usually buys in very small quantities, the drug being packed in decks or capsules of one or two grains each for which he pays $1.00 or $2.00 each. Most addicts live a "hand to mouth" existence and cannot therefore purchase large quantities of their drugs. The fact that these prices are known and are comparatively low in New York does not mean that illicit drugs may be readily purchased. On the other hand, drug smugglers or peddlers are very cautious and sell only to persons whom they regard as trustworthy in the illicit traffic.

Most smoking opium is smuggled through Seattle and distributed southward and eastward as other narcotic drugs are distributed from New York.

No Increase in Addiction

The official surveys made disclose that there are comparatively few new addicts. Very few confirmed narcotic addicts are permanently cured and the average age of all addicts now apprehended is much higher than a few years ago, thereby indicating that while most persons now addicted remain in such a state but few other persons are contracting the habit. The alarming charge has been made that school children are using narcotic drugs. Such charges have been thoroughly investigated officially and found to be utterly without foundation in fact. The prices which persons using these drugs are required to pay would be prohibitive of any purchase being made by school children. Likewise, it is strictly out of accord with the methods of distributing and the policy of peddlers in selling only to trusted buyers to anticipate sales being made to school children. There is no cause whatever for alarm in this connection; the charge cannot be officially supported.

Treatment of Addicts

The treatment of addicts with the view to cure of their habit is not a matter which, under existing conditions, may properly concern directly enforcement officials or even absorb their further attention. Of course, if there were no addicts there would be no drug problem. But this is not the case. Moreover, drug addicts are rarely cured, most of them being mentally deficient or psychopathic characters. They are often treated and temporarily stop the use of drugs but they are sure to return to such use eventually when opportunity affords. If there were no drugs available and all addicts were so treated as to be able to live without their drugs they would be in effect cured whether mentally so or not. It will be fruitless, therefore, as a permanent proposition, to proceed further with curing drug addicts of their habit, unless the source of supply for the drugs they now use is eliminated. Much in this connection, however, may

(Continued on page 282)

Is Geranium Pointed Higher?

A situation has arisen in geranium that has caused several factors to look for a return to prices of a few years back. However, many more cautious dealers see only a return of the frequent bullish stories that generally prove unfounded in fact. Are the bullish factors merely guessing or not?

THE dealers in essential oils are quite evenly divided on the question of whether geranium oil is to stage a sharp price advance or not. Surely this is a peculiar situation since they are practically all in possession of the same information and all are anxious to protect buyers if the price is to advance. Incidentally, they are anxious to make a substantial profit for themselves. There can be nothing lost by advising buyers to cover in view of an advance, but on the other hand, if buyers stock on a dealer's advice and the market does not advance but rather goes the other way, the buyer's confidence in the dealer is upset.

The situation is one of uncertainty. The dealers have been fooled before and they are loath to be fooled again. Geranium oil has been very low in price for many years past. On many occasions information from the primary markets has come to dealers here that has led these dealers to believe that an advance in price was certain. On these occasions many of the dealers not only advised their favored consumers to cover on oil, but they also backed the information with their own money. The advance never materialized, and consequently many dealers will not bank on the most gilt-edged information concerning a geranium oil advance.

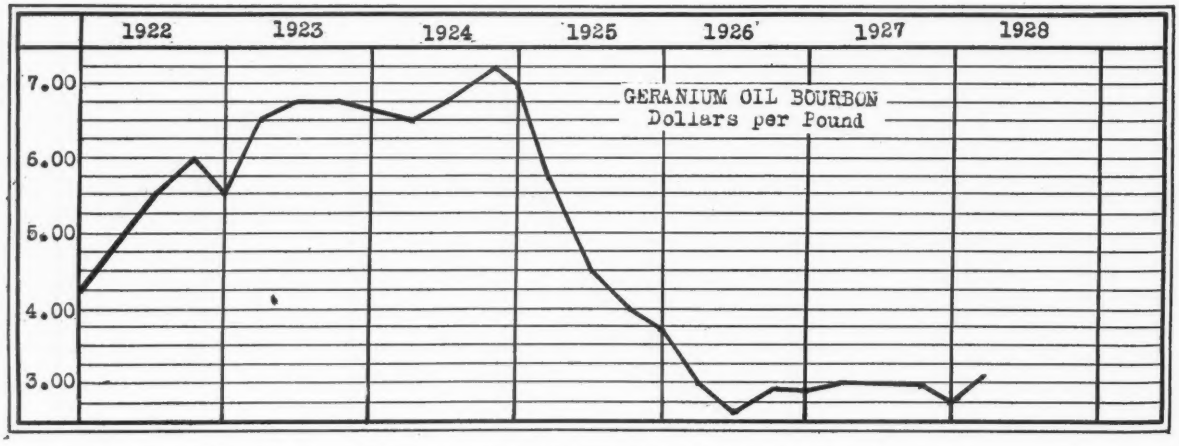
This is the real reason why an advance in geranium is not generally predicted, except, of course, insofar as some dealers may be short of supplies. The information coming out of Reunion, the source of the Bourbon oil, has pointed to a small crop. While the figures may have been given out with a view to strengthening the market, the present attitude of the sellers in Reunion tends to bear out their predictions. The figures that came out of Reunion earlier in the year were to the effect that 103,000 kilos of oil were to come from the crop that was harvested by October first, compared with 183,000 killos from the crop of the year before.

The oil imported into this country during the past number of years is as follows:

	Pounds	Dollars
1927	185,676	468,953
1926	222,386	526,601
1925	203,219	808,411
1924	108,287	682,671
1923	142,427	753,842
1922	20,663	94,941

From these figures it will be seen that the United States is consuming very large quantities of geranium oil. While the figures for 1927 showed a marked decrease from those of 1926 and 1925, still they were well above those of 1924 and 1923. The prices for

(Continued on page 280)



The market for geranium oil has appeared abnormally low for at least the past two years.

News of the Drug Industries

Annual N. Y. Board of Trade Banquet Is Attended By Over Four Hundred

Ex-Governor Silzer of New Jersey Tells of Work of Port Authority in Helping Drug and Chemical Trade—Arthur S. Somers Presides As Toastmaster—Penick Reviews History of Drug and Chemical Section—Gathering Includes Many Prominent in Drug Circles.

With the possible and traditional exception of Hoboken, all sections of the so-called Metroplitan district, including all that territory within a forty mile radius of the City Hall of New York, came in for a great deal of mutual congratulations by representatives of both New York and New Jersey at the third annual dinner of the Drug and Chemical Section, New York Board of Trade and Transportation, at the Waldorf-Astoria, March 15. Over four hundred members of the drug, chemical and allied trades heard the Hon. George S. Silzer, former governor of New Jersey, chairman of the Port Authority of New York, and president of the Interstate Trust Co., emphasize the importance of the work of the Port Authority in aiding the further development of the drug and chemical industries in Metropolitan district.

In pointing out the position occupied by these industries. He said that New York and its environs constitute the largest single chemical center in the United States, 17.1 per cent. of the establishments and 20.6 per cent. of the wage earners engaged in the manufacture of chemical in the United States being located in the New York area. Furthermore, in 1925, New York city alone had 7.9 per cent. of the chemical establishments, 14.2 per cent. of the fine chemical plants, and 10.1 per cent. of the proprietary medicine plants, of the total number in the United States.

In addition to being the largest market on the continent for perfumes and cosmetics, he said that New York City was the largest center for manufacturing these products, while, at the same time, it produced 11.9 per cent. of the total value of soaps manufactured. He showed how that interstate commission, known as the Port Authority, was aiding the industries centered around the New York area, by providing transportation and terminal facilities for their constantly increasing demands.

Hon. Arthur S. Somers, president, Fred L. Lavanburg Co., and member of the Board of Education of the City of New York, officiated as toastmaster, and, in addition to the principal speaker of the evening, introduced C. C. Concannon, chief, Chemical Division, Department of Commerce, who said a few words. The last to be introduced was "Sir James Elwell Cowie" an English humorist, who proved to everybody's satisfaction that he could be both English and a humorist.

In opening the meeting, S. B. Penick, S. B. Penick & Co., chairman of the section, traced the history and work of the Drug and Chemical Section. "Problems, many times of a serious character, arising from national and State legislation relating to the manufacturing, handling and sale of drugs and medicines, amendments to the liquor laws, the storage of merchandise, matters of fire insurance, compulsory labeling of poisons and medicines, delays in passing importations through the customs, troubles with the Bureau of Chemistry and a variety of other subjects represent a few of the matters which have been successfully dealt with to the benefit of the entire trade," said Mr. Penick.

Committee in charge included Percy C. Magnus, Magnus, Mabee & Reynard, P. Samuel Rigney, Roessler & Hasslacher Chemical Co., Charles L. Huisking, Charles L. Huisking, Inc., A. Bakst, Bakst Bros., S. W. Fraser, Burroughs, Wellcome Co., Francis J. McDonough, N. Y. Quinine & Chemical Works, Edward Zink, Eli Lilly & Co., Charles A. Prickitt, The Upjohn Co., and H. B. Shattuck Abbott Laboratories.

Among the firms represented at the dinner were: Long Island Drug Co., Owens Bottle Co., United States Industrial Alcohol Co., Merck & Co., Fritzsche Bros., Inc., Rosesler & Hasslacher Chemical Co., Eli Lilly & Co., Ketchum & Co., Inc., Burroughs, Wellcome & Co., Cooper & Cooper, Hoffman La Roche Chemical Co., Centaur Co., Commons Bros., Norwich Pharmacal Co., H. K. Mulford Co., Monsanto Chemical Works, Illinois Glass Co., Henry B. Cohen Drug Co., Kasciber, Chatfield Shellac Co., Warner Chemical Co., S. B. Penick & Co., Bakst Bros., Dodge Olcott Co., Cox, Aspden & Fletcher.

C. S. Littell & Co., Inc., Givaudan-Delawanna, Inc., P. R. Dreyer, Inc., Dow Chemical Co., MacNair Dorland Co., Mallinckrodt Chemical Works, Magnus, Mabee & Reynard, Chas. L. Husiking, Inc., Schering & Kahlbaum, Wolf-Thomen, Inc., L. Eisen & Co., Inc., Bayer Co., Inc., Bauer & Black, Maltbie Chemical Co., E. Gussman & Sons, Inc., Magnus, Mabee & Reynard, Norda Essential Oil & Chemical Co., Fries & Fries, LoCurto & Funk, E. J. Barry, August Giese & Son, Ehrmann-Strauss Co., Gale T. German Co., Rossville Co., E. Gussman & Sons, Inc., Menley & James, Sterling Magnesia Co., Inc., Sherwood Petroleum Co., Sydney Ross Co., Innes Speiden & Co., McKesson & Robbins, Frederick Stearns & Co., R. Hillier's Son Co., Inc., W. Benkert & Co., Inc., King & Howe, L. K. Liggett Co., Colgate & So., Hymes Bros., J. L. Hopkins & Co., Johnson & Johnson, Abbott Laboratories, Hooker Electrochemical Co., Sharp & Dohme, DRUG MARKETS, *Chemical Markets*, Van Dyk & Co., H. Halper, Inc., Bronx Drug Co., E. R. Squibb & Sons, A. Klipstein & Co., Ketchum & Co., Inc., D. Rengue, Rhodia Chemical Co., Haggerty Bros., H. W. Henning & Son, Kuttroff, Pickhardt & Co., Inc., Geo. Lueders & Co., Roeber & Kuebler Co., Old Dutch Mustard Co., Seabury & Johnson.

James B. Horner, Inc., New York Quinine & Chemical Works, Baker Castor Oil Co., Morgenstern & Co., S. B. Leonardi & Co., Arthur A. Stilwell & Co., Union Carbon & Carbide Corp., Lillibridge, Weeks & Thelow, Barrett Co., Yates Drug & Chemical Co., Upjohn Co., Bridges, Neumer & Co., Charles Pfizer & Co., J. E. Bernhard & Co., Dupont & Cie, Julius Schmid, Inc., J. Personeni Co., Inc., Standard Oil Co., New Jersey Wholesale Drug Co., C. B. Peters & Co., Pacific Coast Borax Co., White Tar Co. of New Jersey, Inc., J. L. Hopkins & Co., Heyden Chemical Corporation, American Druggists Syndicate, Owl Drug Co., New York Extract & Perfumery Co., J. M. Maris & Co. Henry J. Sage Co.

C. E. Schumacher Co., Ungerer & Co., Seil, Putt & Rusby, B. M. Spencer & Co., Sherwood Petroleum Co., Petty's Laboratories, Vulcanized Rubber Co., Fraser Tablet Co., Spielman & Co., Sultan Drug Co., Stallman Co., Parke, Davis & Co., Harshaw, Fuller & Goodwin, Ernst Bischoff Co., Tracy Pearl & Co., Grasselli Chemical Co., Huxley Laboratories, H. Kohnstamm & Co., Inc., Calco Chemical Co., Webter Medical Tea Co., H. Hoeper, Inc., E. Fongera & Co., Atlantic Coal Tar Distillates, Harshaw, Fuller & Goodwin Co., Maurice Levy, Inc., Thurston & Braidich Brooks & Porter, Albert F. Bertine Co., Ciba Co.

Drug Industries Personalities

James F. Pickett, secretary United Medicine Manufacturers of America, is elected vice-president, Munyon Remedy Co., Scranton, Pa. He is a graduate of the Philadelphia College of Pharmacy and has been associated with William A. Woodbury, Inc., Alonzo O. Bliss Medical Co., and Vasco Products, Inc. In 1921 he was instrumental in organizing the United Medicine Manufacturers of America, served as president of the organization until 1924, when he was elected secretary, which position he now holds.

Williams Bros. Manufacturing Co., Glastonbury, Conn. announces election of following officers: George H. Pinney, president, succeeding James S. Williams who resigned after holding office since 1907; Otto Thieme, vice-president, to succeed George G. Williams; and Richard S. Williams, secretary, to succeed Samuel H. Williams. In addition to officers, board of directors consists of William R. Stocking, and Gerald A. Richford.

William T. R. Mersereau, head of export department, Schieffelin & Co., New York, dies in Newark, March 1, aged 68, after fifty-three years active service with the company. He was a son of William S. Mersereau, former second vice-president of the company, and before taking charge of exports, was for many years purchasing agent.

Lester S. Bacharach, former treasurer and one of organizers of American Solvents & Chemical Corp. resigns from that company with intention of promoting an amalgamation of several small alcohol companies into one large operating unit. This new amalgamation is expected to involve combination running into several millions of dollars.

William W. Park, president, John D. Park & Sons, Cincinnati, dies at St. Petersburg, Fla., February 28, aged 58. Firm was the wholesale interest involved in the federal litigation which resulted in the Indianapolis decree outlawing contracts to maintain resale prices.

Drug and Chemical Club, New York, at thirty-third annual meeting elects following board of governors for coming year: Louis F. Burke, John S. Turn, Robert H. de Greeff, Theodore Taylor, William Williams and William L. Steele.

Dr. R. J. Forhan's New York home at 334 Riverside Drive burns March 3, with estimated damage of $200,000. The tooth paste manufacturer was in California on business, but his wife was rescued from flames by firemen.

Charles L. Burgoyne, former president, Emery Candle Co., dies February 27, aged 74, at Birmingham, Ala., where he had lived since his retirement two years ago.

Peter P. Carney, formerly advertising director, Remington Arms Co., Inc., is appointed advertising and sales promotion manager, Mennen Co., Newark, N. J.

William E. Martin, formerly with Chas. L. Huisking, Inc., N. Y., establishes an import agent and brokerage business for the drug trade at 101 Beekman St. N. Y.

Harold Goulden, formerly with Squibb Laboratories, is appointed instructor, Department of Biochemistry, N. J. College of Pharmacy.

B. E. Wallach, formerly with E. M. Javitz & Son, New York, is now associated with Philipp Bros., Inc., New York.

Palmolive-Peet Co., Chicago, elects Warde B. Chittenden, director of purchases, a director of the company.

J. Augustus Miller, moves offices to 44 Bergen St., Brooklyn.

New Cosmetic Regulation Bill Introduced in N. Y. Legislature

Representative Doyle introduces a cosmetic bill in New York State Assembly which provides as follows:

No cosmetic preparation to be used as a hair dye, hair tonic, dye remover, face bleach, face cream, face powder, rouge, mouth wash, toilet water, or depilatory, shall be sold, offered or exposed for sale, or given away, unless the package or container have affixed to it a label, in a form to be prescribed by the commissioner of public health stating:—"The formula from which this preparation is made contains no lead mixtures, aniline derivatives, paraphenylenediamine, in excess of two per centum bichloride of mercury, ammoniated mercury, arsenic or caustic substances." Such label shall also state the name and address of the manufacturer or compounder and the year when the article was manufactured or compounded, together with the ingredients used therein, but need not state the quantities. Any person who shall sell or offer or expose for sale or give away any such cosmetic preparation which on chemical analysis is found to contain any of the prohibited ingredients in a quantity sufficient to be injurious to health, or any person who shall sell, offer or expose for sale or give away any such cosmetic not so labeled, shall be guilty of a misdemeanor, punishable on conviction by a fine of not exceeding $500 or imprisonment in a county jail or penitentiary for not exceeding six months or by both such fine and imprisonment. The commissioner of health shall be in charge of the enforcement of the provisions of this article.

Zonite Acquires Agmel Corp.

Zonite Products Corp., New York, acquires Agmel Corp., Californian manufacturer of aguamiel, the fresh sap of Mexican maguey plant, considered to possess therapeutic qualities. This is second subsidiary acquired by Zonite Products which owns controlling interest in Larvex Corp. Ellery W. Mann, president, Zonite Products, is now president of Agmel Corp. Directors of Agmel Corp. are Thomas L. Chadbourne, C. M. Chester, Jr., H. B. Close, Claude Dunning, E. F. Hutton, Ellery W. Mann, and J. F. Prescott.

Recent trade mark suit of Lambert Pharmacal Co. reveals fact that company spent following sums for advertising "Listerine": 1922, $258,579.02; 1923, $461,872.13; 1924, $1,006,710.97; 1925, $1,770,826.76; 1926, $2,547,449.45; 1927 (Jan. 1-Oct. 31) $2,602,733.05; or a grand total of $8,648,171.38.

Bill which would make "non-mailable" all advertising matter not requested or solicited by the person to whom it is addressed and which is marked "Personal," is introduced in Senate, Jan. 27 by Senator Royal S. Copeland.

Drug & Chemical Club elects following officers: Joseph K. Smith, president; Percy C. Magnus, vice-president; John J. Powers, treasurer; and Col. Frederick E. Humphreys, secretary.

S. B. Penick & Co., New York, is appointed sole United States agent for sale of "Vita", medicinal cod liver oil, made by Ragnar-Schjolberg, Bodo, Germany.

Dunbar Molasses Co., La., transfers authority to Dunbar Molasses Corp., Delaware, with capital $2,000,000 and 21,000 shares no par.

Parfumerie Bellefontaine, Ltee., Montreal, purchases stock and plant of J. J. Jutras, Ltee., perfume manufacturers and will continue manufacture of lines formerly made by Jutras Co.

Johann Hoff Co., New York malt extract manufacturer appoints Michaels & Heath, Inc., N. Y., to direct its advertising account.

{ *Drugs and the Government* }

Lambert Pharmacal Co. wins decision in suit alleging infringement of trademark rights by Listerated Co., Houston. Holding that the Houston company was guilty of infringement of trademark rights by using term "Lister" and using Listerine advertisements in selling its hair tonics products, the judge of the Federal Court ordered the books of the company turned over to an auditing firm and all profits shown be paid to the makers of Listerine. Listerated Co. was also enjoined from the further manufacture of products under the term "Listerated."

Sustaining protests of the Rietmann-Pilcer Co. the United States Customs Court finds that imported toilet soap, molded into small figures of animals, are dutiable at the rate of 30 per, cent. ad valorem, under paragraph 82, Act of 1922, rather than as assessed by the collector, at the rate of 70 per cent. as toys under paragraph 1414. (Protests Nos. 91538-G-14108-25 etc.)

A somewhat similar decision sustains a protest (Nos. 40891-G-34472-24) of I. W. Rice & Company.

Narcotic regulations have been amended as follows: Narcotic drugs and preparations must at all times be securely kept and properly safeguarded where they will be available for inspection by properly authorized officers of treasury department. In addition, narcotic content of a one ounce solution in an order from practitioner, has been limited to 20 per cent.

Wisconsin decides that department and general stores are not permitted, under laws of the state, to sell U. S. P. or N. F. preparations unless registered pharmacist is in charge. Merchants whose stores are three or more miles distant from a registered pharmacist are exempted, but must obtain permit from State Board of Pharmacy to make such sales.

Federal Trade Commission decides that unless a beverage contains a natural fruit or juice in substantial quantity it shall not be advertised by the name of that fruit in issuing to Good Grape Co., Chattanooga, a modified order to cease and desist.

National Wholesale Druggists' Association is advocating the so-called Chatfield amendment to the Stalker bill now before the house. The amendment is designated to protect employers whose subordinates, without knowledge or consent of principals, violate prohibition laws or regulations.

Flavoring Extract Manufacturers' Association warns those of its members who are recovering alcohol for reuse, that regulation require a permit expressly authorizing use of still for recovery of alcohol, and registry of the still in accordance with Internal Revenue Laws.

Philadelphia Circuit Court of Appeals decides that alcohol permit holders must be given full and fair hearing before privileges may be revoked by Federal Prohibition Administrator, in appeal of Jean Chemical Co.

Federal Trade Commission issues cease and desist order to manufacturer engaged in selling certain toilet preparations which were advertised as restoring original color to grey hair.

United Medicine Manufacturers of America, through Clinton Robb, general counsel, has issued Bulletin 104, regarding recent legislation in guaranties and serial numbers.

American Pharmaceutical Association, Philadelphia branch, and Philadelphia Association of Retail Druggists hear Congressman M. Clyde Kelly discuss Capper-Kelly fair trade bill.

U. S. Industrial Alcohol Co., New York, receives $1,506.20 judgment against Philip W. Zobel, Brooklyn.

Mexico Lifts Ban On Virus Vaccines

Mexican Health Department let it be known last year that importations of virus vaccines would be prohibited, reports Acting Commercial Attache George Wythe. For several months the leading importers of biologics discontinued their importations of virus vaccines, as they did not care to be caught with stocks on hand when the prohibition went into effect. As a result of protests by Mexican doctors, the prohibition has not been put into effect, and importers are again receiving shipments of virus vaccines. However, very little of this vaccine is going into Mexico, as the Health Department supplies it free to anyone that wants it. One of the leading wholesale drug houses imports only 500 tubes of virus vaccine monthly.

With reference to exportations of veterinary biologics from the United States, 434 certificates were issued during the last fiscal year to cover shipments made to 27 foreign countries. Antihog-cholera serum is being exported in considerable quantities to Mexico, Spain, and several of the countries of South America. Records of the United States Bureau of Animal Industry indicate that certificates were issued in 1926 to cover the exportation of 7,261,100 cc.. of antihog-cholera serum. The control of biologics intended for human use is vested in the Public Health Service of the Treasury Department.

Hotel Wawasee, located at Lake Wawasee, Kosciusko, Co., Ind. will be the scene of the meeting of the American Pharmaceutical Manufacturers' Association to be held June 4 to 9. The hotel is just two years old and has 150 rooms half of which face on the Lake and half on the golf course.

A bill, sponsored by Representative Vestal, providing for the expediting of trade-mark decisions by broadening the powers of U. S. Court of Customs Appeals through the transfer to it of patent and trade-mark cases now tried before the Court of Appeals of the District of Columbia, is now before Congress. It is the contention of those who support the bill that such transfer of jurisprudence would materially reduce delays in the outcome of trade-mark cases.

Tanner Kelp Products Co. and Philip R. Park Co., Inc., both of Los Angeles start work on $100,000 plant for extracting by-products from kelp. The Park company will extract a stock food and the Tanner company iodine, salts, poultry feed, lacquer base and other chemicals.

Dr. Pierre Chemical Co., Chicago, manufacturer of Boro Pheno-Form, acquires the interests of Partola and all allied products. Cooper & Cooper, N. Y., for a number of years exclusive operators and agents of Partola, were instrumental in arranging this consolidation.

Kokusai (International) Pharmaceutical Co. is organized in Toyama Japan with capital of yen 1,000,000 to export drugs to Mexico and Brazil. Seibei Nakada, president, Nakada Pharmaceutical Co., Tokio, is central figure in new enterprise.

Coming Meetings

United Drug Co. April 10-11. Los Angeles, Cal.

Medical Society of State of North Carolina. April 17. Pinehurst, N. C.

New York State Homeopathic Society. April 24-25, New York.

South Carolina State Medical Association. April. Columbia, S. C.

Kansas Pharmaceutical Association. April. Wichita, Kan.

Rexall Clubs Southern Section. April. Los Angeles, Cal.

Rexall Clubs Pacific Northwest. April or May. Spokane, Wash.

Hawaii Medical Association. April or May. Hilo, Hawaii.

Ohio State Medical Association. May 1-3. Cincinnati, O.

American Manufacturers Toilet Articles. May 7, 8, 9 Atlantic City.

Texas State Medical Association. May 8-10. Galveston, Tex.

Mississippi State Medical Association. May 8-10. Meridan, Miss.

Medical Association of Georgia. May 9-11. Savannah, Ga.

Iowa State Medical Society. May 9-11. Cedar Rapids, Ia.

New Hampshire State Medical Society. May 14-16. Manchester, N. H.

Illinois State Medical Society. May 15-17. Chicago.

Nebraska State Medical Association. May. Hastings, Neb.

Ontario Medical Association. May 29-June 1. Kingston, Ont.

Association of Food & Drug Officials of Southern Central States. Spring. Lexington, Ky.

American Pharmalogical Society. Spring. Ann Arbor, Mich.

American Society Biological Chemists. Spring. Ann Arbor, Mich.

American Pharmaceutical Manufacturers Association, June 4-9. Hotel Wawasee, Lake Wawasee, Ind.

Massachusetts Medical Society. June 5-6. Worcester, Mass.

Medical Society of New Jersey. June 6-9. Atlantic City, N. J.

Massachusetts State Pharmaceutical Association. June 8-9. Swampscott, Mass.

American Medical Association. June 11-15. Minneapolis, Minn.

Arkansas State Pharmaceutical Association. June 12-14. Hot Springs, Ark.

Texas State Pharmaceutical Association. June 12-14. Abilene, Tex.

West Virginia State Pharmaceutical Association. June 12-13. White Sulphur Springs, W. Va.

Mississippi State Pharmaceutical Association. June 13-14. Jackson, Miss.

Minnesota State Medical Association. June 18. Minneapolis, Minn.

Kentucky Pharmaceutical Association. June 19-21. Mayfield, Ky.

Missouri Pharmaceutical Travelers Association. June 19-22. Sedalia, Mo.

New York State Pharmaceutical Association. June 19-22. Saratoga Springs, N. Y.

Wisconsin State Pharmaceutical Association. June 36-28 Green Lake, Wis.

Pennsylvania State Pharmaceutical Association. June 19-21. Buena Vista Springs, Pa.

California Retail Drug Association. June. San Diego, Cal.

Connecticut State Pharmaceutical Association. June. New London, Conn.

Florida State Pharmaceutical Association. June. Ocala, Fla.

Indiana State Pharmaceutical Association. June 3rd week. Culver, Ind.

Ohio State Pharmaceutical Association. June. Columbus, O.

New Jersey State Pharmaceutical Association. June. Atlantic City, N. J.

Nebraska State Pharmaceutical Association. June. Omaha, Neb.

Price List Changes

Item	Unit	Now	Was
Armour & Co., Chicago, Ill.			
N—Concentrated Liver Ext., pints	doz.	$48.00	
N—Peptonal, pints	doz.	12.00	
N—Corpus Lutein Liq., Ampoules 1cc.	each	.90	
N—Liver Powder, ozs.	per lb.	16.00	
¼, ½ and lb. bots.	per lb.	14.00	
N—Ovarian Liq., Ampoules, 1 cc., 6's	each	.60	
N—Piptuitary Liq., Posterior Lobe, Double Strength, Amps., 1 cc., 6's.	each	2.75	
B. F. Allen Company, New York.			
C—Allen's Tooth Paste, retails 50c.	doz.	3.00	
N—Allen's Shaving Cream, retails 50c	doz.	3.00	
Arkase Company, Inc., Philadelphia, Pa.			
N—Arkase, 1 oz bots.	doz.	9.00	
The Brown Export Company, New York.			
C.—Sensapersa Preparation, retails $1.00	doz.	8.00	
H. L. Hicks Drug Company, Rocky Point, N. C.			
C—Elixir A. C. & A. Comp.	doz.	18.00	
Eli Lilly & Co., Indianapolis, Ind.			
N—Ephedrine Sulphate, ¼ oz. vials.	each	9.70	
30 grain vials	each	3.00	
N—Ephedrine Sulphate, H. T., ½ gr., 20's	each	1.15	
N—Ephedrine Sulphate, 3% Solution pints	each	12.00	
N—Ephedrine Sulphate Syrup, pints	each	2.35	
N—Ephedrine Comp. Inhalent, ozs.	each	.85	
N—Ephedrine Comp. Ointment, ½ ozs.	doz.	3.00	
N—Ephedrol (30 grs. Ma Huang per oz.) pints	doz.	10.20	
C. S. Littell & Co., Inc., New York			
C—Patean, retails 15c	doz.	1.10	
The Mello-Glo Company, Boston, Mass.			
Mello-Glo			
N—Skin-Tone, retails $1.00	doz.	8.50	
N—Beauty Cream, 2 oz., retails $1.00	doz.	8.50	
N—Cocoa Butter Cleansing Cream, 4 oz., retails $1.00	doz.	8.50	
N—Face Powder, retails $1.00	doz.	8.50	
N—Rouge, retails 50c	doz.	4.25	
W. M. Olliffe, New York.			
Dr. Barrett's St. Vitus Dance Remedy, retail $3.75	doz.	36.00	
Dr. Becker's Eye Balsam, retails 50c.	doz.	4.00	
Dr. Olliffe's Epileptic Mixture, retails $3.75	doz.	36.00	
Dr. O'Neill's No. 266, retails $1.25.	doz.	10.80	
Dr. Olliffe's Tasteless C. L. O. with Wild Cherry, retails $1.25	doz.	10.80	
Big 6 Black Balsamic Paste, retails $1.25	doz.	10.80	
Olliffe's Sarsaparilla with Potash Iodide, retails $1.25	doz.	10.80	
Olliffe's Cough Mixture, retails 50c.	doz.	4.00	
Injection 15-20, retails $1.00	doz.	9.00	
Olliffe's Wintergreen Liniment, small, retails 25c	doz.	2.00	
Large size, retails 50c	doz.	4.00	
Itcholine Pile Oint., retails 35c	doz.	2.80	
Large size, retails 50c	doz.	4.00	
Olliffe's Healing Salve, retails 25c	doz.	2.00	
Large size, retails 50c	doz.	4.00	
Olliffe's Epulotic Ointment, retails 25c	doz.	2.00	
Large size, retails $1.00	doz.	8.00	

The Financial Markets

Lehn & Fink 1927 Dividend Lower

Last Year's Statement Shows Net Of $1,277,142—Dividend Off Slightly—Lambert Pharmacal Earnings Up—Monsanto Income Also Higher—Home Products Report Practically The Same As 1926.

Report of Lehn & Fink Products Co. and subsidiaries for year ended December 31, 1927, shows net profits of $1,277,142 after expenses and Federal taxes, equivalent after allowing for dividend requirements on management stock, to $4.32 a share earned on 285,000 shares of no par common stock. This compares with $1,440,606 or $5.26 a share on 265,000 shares outstanding in 1926.

Consolidated income account for 1927 compares as follows:

	1927	1926
Profit after expenses	$1,476,465	$1,665,441
Federal Taxes	199,323	224,835
Net profit	$1,277,142	$1,440,606
Common divs.	825,000	795,000
Management divs.	45,000	56,250
Lysol, Inc. min. int.	2,104	.....
Surplus	$405,038	$589,356

Consolidated balance sheet of Lehn & Fink Products Co., and subsidiaries as of December 31, 1927, compares as follows:

Assets	1927	1926	1925
†Land, bldgs & eq.	$1,276,135	$1,144,937	$1,178,484
Trademarks, etc.	7,653,171	6,214,421	6,214,421
Investments	277,439	305,936	214,362
Cap stk Prod Real Co.	1	1	1
Cash	297,665	231,436	512,127
U. S. bonds, etc.	.....	.....	193,599
Accts. rec.	484,521	345,007	274,487
Sundry debt	44,383	42,883	29,114
Inventories	668,852	498,938	584,866
Def chgs.	102,829	80,865	49,292
Total	$10,804,996	$8,864,424	$9,250,753
Liabilities			
*Cap stk & surp.	$9,271,506	$8,383,968	$7,796,775
Mint int Lysol, Inc.	29,688	27,690	26,047
Accts pay & accruals	308,049	249,493	170,717
Gold notes	875,000	.....	.....
Reserves	319,753	203,273	1,257,214
Total	$10,804,996	$8,864,424	$9,250,753

*Represented by 285,000 no par shares of common stock and 150,000 no par shares of management stock.

†Less depreciation and mortgages.

Lambert Earnings Advance to $6.22

Consolidated net profit of the Lambert Co. for year ended December 31, 1927, was $2,997,979 after charges and Federal taxes, equivalent to $6.22 a share on 481,250 shares of common stock outstanding after conversion of the entire 100,000 shares of deferred stock in accordance with Article 4 of the certificate of incorporation. This compares with $1,591,834 for year 1926 or $5.30 a share on 281,250 shares of common stock outstanding on December 31, 1926, after allowing for participating features of the deferred stock then outstanding and now converted.

Article 4 of the certificate of incorporation provides that the deferred stock may be converted into equal number of shares of common stock when earnings in the previous year shall have equaled at least $6 per share on common stock outstanding plus that proposed to be issued on conversion. Accordingly, the entire 100,000 shares of deferred stock have now been converted into common stock so that the capitalization now consists of 481,250 shares of common stock.

Earnings for year 1927 do not include earnings applicable to the stocks of subsidiaries acquired during the year prior to date of their acquisition. The 481,250 shares of common stock now outstanding include the 100,000 shares issued during 927 in connection with these acquisitions.

Monsanto 1927 Income Higher

Monsanto Chemical Works reports for year ended Dec. 31, 1927, net income of $672,622 after all charges, equivalent to $6.11 a share on 110,000 shares of no par capital stock. This compares with $341,407 or $5.50 a share on 62,000 shares of $50 par stock in 1926.

Balance sheet as of December 31 last shows current assets of $2,271,213 as against current liabilities of $289,248, leaving a net working capital of $1,981,965. At the end of the preceding year current assets totaled $2,065,467 and current liabilities were $371,371, leaving a net working capital of $1,694,106. Cash and government securities amounting to $562,579 were well in excess of total current liabilities. Profit and loss surplus at the end of the year amounted to $1,644,642.

During the year stock of the company was changed from 62,000 shares of $50 par to 110,000 shares of no par value. A block of 10,000 shares of the new stock was sold publicly. A new process for the manufacture of sulfuric acid was developed and, in addition to its use in the company's own plants, is being used by other manufacturers under license.

Home Products Earnings Steady

Net income of American Home Products Corp. for year ended December 31, 1927, was $1,962,918 after charges, Federal taxes, etc., equivalent to $3.67 a share earned on 534,000 no-par shares of stock outstanding at end of year, comparing with $1,109,083, or $3.69 a share on 300,000 shares in 1926.

Income account for 1927 compares as follows:

	1927	1926
Profit after charges	$2,272,126	$1,278,415
Est. federal taxes	305,856	167,899
Sub. co. dividends	3,352	1,433
Net income	$1,962,918	$1,109,083
Dividends	755,800	*600,000
Surplus	$1,207,118	$509,083

*Includes in 1927 $87,600 payable January 3, 1928, and in 1926 $60,000 payable January 3, 1927.

Stockholders of Coty, Inc., approve increase in authorized capital stock from 309,300 to 459,300 common shares of no par value, all of which will be outstanding. The additional stock will be used in part to pay a 6 per cent. stock dividend and partly to provide for future stock dividends. Company is understood to be planning expansion of its present facilities and the entry into new lines of business, but has not disclosed the nature of its plans as yet.

National Distillers Products Corp. reports for 1927 net income of $58,973 after all charges, equal to 55 cents a share earned on 107,720 preferred shares, against net loss of $137,771 in 1926.

Household Products Steady

Household Products, Inc., and subsidiaries, for year ended December 31, 1927, report net profit of $3,001,260 after Federal taxes, equivalent to $5.22 a share earned on 575,000 shares of no par stock. This compares with $3,000,219 or $5.21 a share in 1926.

Consolidated balance sheet of Household Products, Inc., and subsidiaries as of December 31, 1927, compare as follows:

Assets	1927	1926	1925	1924
*Ma eq etc	$495,112	$512,211	$575,449	$136,489
Accts rec	964,643	901,970	868,341	510,015
U. S. bonds	675,000	276,266	76,266	1,350,281
Cash	1,538,773	1,244,879	1,141,363	725,415
Inventories	572,954	717,017	715,853	361,071
Prep exp	35,038	41,515	51,881	56,106
Goodwill	18,100,000	18,100,000	18,100,000	14,000,000
Total	$22,381,520	$21,793,858	$21,529,153	$17,139,377
Liabilities				
Cap stk	†$17,625,000	†17,625,000	†17,625,000	$15,000,000
Accts pay	14,777	‡121,919	‡630,590	‡14,441
Tax res etc	1,030,856	998,778	1,175,383	451,549
Divs pay	287,500	287,500	287,500	250,000
Surplus	3,423,387	2,760,661	1,810,680	1,423,387
Total	$22,381,520	$21,793,858	$21,529,153	$17,139,377

*After depreciation. †Represented by 575,000 no par shares. ‡Includes bills payable.

Palmolive Peet Co. reports for year ended Dec. 31, 1927, net income of $5,023,665 after charges, equivalent after preferred dividends to $5.04 a share on the 900,006 shares of no par common stock outstanding. This compares with $4,114,347, or $4.03 a share on the same share basis for the preceding year.

At the annual meeting of stockholders, F. H. Little and W. B. Chittenden were elected directors to succeed B. W. Railey and R. C. Rathbone, resigned. Other retiring directors were reelected.

Boston Stock Exchange is advised that transfer books of the first preferred stock of United Drug Co. are to be permanently closed at the close of business on March 14 and the transfer books of the common stock be permanently closed at the close of business on such a date not earlier than March 14 as may be fixed by written notice from the company.

Report of F. N. Burt Co. for 1927 shows profit of $653,972 after plant depreciation and amortization of patents, but before taxes. This compares with $500,189 earned in 1926. The surplus at the end of 1927 was $865,763, against $687,280 at the close of 1926.

Net income of Mead Johnson & Co. in 1927 was $1,068,541 after charges and Federal taxes, equivalent after preferred dividends to $6.33 a share earned on 150,000 no par common shares, against $1,030,808, or $6.03 a share, earned in 1926.

Certo Corp., and subsidiary, Douglas-Pectin, Ltd. for year ended Dec. 31, 1927 shows net income of $1,160,638 after all charges, equivalent to $3.86 a share on 300,000 shares no par This compares with $1,057,325 or $3.52 share in 1926.

McCormick & Co., Baltimore, increases dividend on common stock from $2 to $3 per year, to be paid March 31 to holders of record March 20. Regular $4 semi-annual dividend on preferred was also declared.

Lambert Co. declares a special dividend of 50c. and the regular quarterly dividend of $1.25 on the common stock both payable April 1 to stock of record March 19.

Drug, Inc., files certificate of incorporation in Delaware with capitalization of 3,000,000 shares of no par value stock.

{ *New Incorporations* }

Lailafleur Co., New York. Medicinal preparations Capital 200 shares common.

Rosalie Puff Corp., New York. Powder Puffs. Capital $5,000.

Harzol Co., Long Island City, N. Y. Capital $1,000.

M. C. Condello Pharmacy, Brooklyn, N. Y. Capital 200 shares common.

Union Dental Instrument Manufacturing Corp., Philadelphia. Delaware charter. Capital $300,000 preferred, 3,000 shares common.

Vita Products, Inc., Cheswick, Pa. Delaware charter. Capital 500 shares common.

Dr. Goedrich Chemicals, Inc., New York. Delaware charter. Capital $300,000 preferred, 6,000 shares no par common.

Adson Chemical Co., New York, Drugs. Capital 300 shares common.

Best Skein Dyeing Co., Brooklyn, N. Y. Capital $20,000.

Duval, Inc., Dover, Del. Perfumes, toilet articles, face and skin lotions. Capital 10,000 shares, no par.

Ecktol Sales Corp., New York. Make toilet articles. Capital $2,000. pfd., 1,000 shares common.

Kemko Products Corp., Brooklyn, N. Y. Drugs. Capital 200 shares common.

Progressive Toiletries, New York. Perfumes, etc. Capital $250,000 preferred, 7,500 shares common.

Rossi Perfume Co., Utica, N. Y. Capital $30,000.

Samuels Drug Stores, New York. Capital, $15,000.

Hauer's, New York. Toilet preparations. Capital $10,000.

Synthesa Laboratories, New York. Chemicals. Capital 500 shares common.

Food Chemistry Corp., Wilmington, Del. Food salts. Delaware charter. Capital $100,000.

Vendomat Stores, New York. Drugs. Capital $50,000.

Medicinal Products Corp., Newark, N. J. New Jersey Charter. Drugs, etc. Capital 100 shares common.

Radium Active Remedies Co., Pittsburgh, Pa. Delaware charter. Radio active compounds, remedies for radium, uranium. Capital $50,000.

Mixol Co., New York. Medicines. Capital $50,000.

Jisol Co., New York. Chemists. Capital $10,000.

Vicine Products System, Tampa, Fla. Delaware Charter. Drugs, perfumes, oils, paints, chemicals. Capital 10,000 shares common.

Demusset, New York. Toilet articles. Capital $10,000.

Chemicolloid Laboratories, New York. Chemicals. Capital $30,000.

Drug, Inc., Wilmington, Del. Delaware Charter. Stocks & Bonds. Capital 3,000,000 shares common.

Household Chem. Corp., New York. Capital 100 shares common.

My Lady Beautiful Appliances Corp., Wilmington, Del. Delaware charter. Beauty appliances, cosmetics. Capital $100,000.

Herman Lewis Co., Wilmington, Del. Delaware Charter. Fertilizer. Capital $100,000.

Vicine Products System, Tampa, Fla. Delaware Charter. Drugs, Perfumes, oils, paints, chemicals. Capital 10,000 shares common.

Thompson's, Ltd., Montreal, Canada, Canadian Charter. Patent medicines, toilet articles, etc. Capital $20,000.

Peninsular Drug Co., Wilmington, Del. Delaware Charter. Capital $50,000 and 500 shares common.

Coty, Inc., 20,000 shares no-par capital stock is admitted to trading privileges on New York Stock Exchange.

Chesebrough Manufacturing Co. declares regular quarterly dividend of $1, payable March 31 to stock of record March 10.

Drug Industry Stocks

1928 Feb. 29th Bid	1928 Feb. 29th Asked	1928 High	1928 Low	1927 High	1927 Low	Sales from Jan. 1928 to Date	Sales 1027	ISSUES	Par $	Shares Listed	An. Rate	Earnings $-per share-$ 1927	Earnings $-per share-$ 1926
								NEW YORK STOCK EXCHANGE					
150¼	151	158½	146	169½	131	287,300	3,604,900	Allied Chem	No	2,178,109	$4.50		9.79
76½	77	82½	70½	77⅞	43¾	1,586,920	8,337,700	American Can	25	2,473,918	2.00	4.11	4.31
140¼	143	140½	136½	141½	126	5,060	28,900	pfd	100	412,333	7.00	31.66	33.38
72½	74	76½	69	74¼	36	34,180	257,800	American Chicle	...	186,595	3.00	6.78	5.75
107	108⅜	110	107	110	90	922	4,313	pfd	...	1,375	7.00	9 mo. 41.02	37.24
12¼	12⅜	14	11	15½	9⅜	66,320	1,132,800	American Drug Syn	10	1,000,000	.80	6 mo. 0.52	Nil
60½	60⅞	67½	59	71	30¾	65,820	706,100	American Home Products	No	300,000	2.00	3.67	3.69
68½	69	78⅜	65¼	69½	53¼	142,150	164,300	Bon Ami A	No	100,000	4.75	5.28	4.75
164	166	187	159	169	101			Borden Co	50	630,896	5.00	10.32	10.86
61¼	62¼	68⅛	54⅞	60½	36	389,500	1,021,700	Canada Dry Ginger Ale	No	450,694	2.00	5.10	3.85
...	...	77	73¼	80	46	17,348	122,750	Certo Corp	No.	300,000	2.50	3.86	3.52
132½	132½	137½	127	131	96½	127,800	734,100	Coco Cola	No	500,000	7.00	9.16	16.50
165	165⅞	169⅜	153½	203	145	64,300	381,600	Corm Sol	No	217,722	8.00	9.24	14.13
88½	89	92½	80½	86½	58¾	198,906	725,400	Cont. Can	No	620,000	6.00	7 mo. 7.54	6.36
125	126	125½	123	126	120	480	3,400	pfd	100	52,930	7.00	7 mo. 86.82	70.55
67	67¼	71⅛	64⅜	68	46¼	404,100	3,165,500	Corn Products	25	2,530,000	3.00	9 mo. 2.69	4.03
138½	140	140½	138½	142½	128	1,400	14,400	pfd	100	250,000	7.00	9 mo. 32.50	47.73
145	146½	146½	123	123	56	109,180	324,100	Coty Inc	No	309,300	5.00	10.80	9.52
115	115½	120½	115½	118	105½	3,540	35,100	Dupont deb	100	799,268	6.00	9 mo. 57.04	52.51
325	327	335	310	343⅞	168	104,960	1,996,300	DuPont de Nemours	No	2,661,658	9.50	15.45	13.98
68½	68⅜	74½	66	71½	46½	568,220	1,246,500	Fleischmann	No	4,500,000	3.00	9 mo. 4.30	4.08
64⅜	64½	69½	64¼	70⅜	43½	25,540	267,400	Household Prod	No	575,000	3.50	5.22	5.22
66½	66⅞	73½	65	77¼	45⅞	104,500	1,079,600	Kresge	10	3,678,619	1.20	9 mo. 3.76	3.36
144	116	117	113½	118	110½	960	4,363	pfd	100	20,000	7.00	9 mo. 699.85	625.22
87½	87¾	88⅞	79½	88¼	66	198,820	1,121,300	Lambert Co	No	281,250	2.50	6.22	...
41	42	45	38	43	32⅜	148,660	524,200	Lehn and Fink	No	265,000	3.00	5.00	5.30
32⅜	33	36½	30½	34½	19¾	69,760	94,900	Life Savers	No	550,000	1.60	2.62	2.27
65	66	77⅜	63½	78⅜	45	126,400	406,800	Liquid Carbonic	No	125,000	3.60	5.90	11.34
80	82½	88	82½	90	55	1,100	15,600	McCrory Stores	No	376,709	1.20	5.26	4.80
131½	131⅜	149½	117	123½	60⅜	2,160,900	3,976,800	Montgomery & Ward	10	1,141,251	4.00	10.25	6.25
56	59	71⅜	55	67⅜	59	13,960	13,400	Nat'l Dist pfd	No	109,795	...	9 mo. 1.62	Nil
34⅜	35½	37⅜	34½	46⅜	20	31,260	1,109,900	Park & Tilford	No	200,000	...	9 mo. 2.44	2.67
26½	26⅜	28⅜	22⅜	27⅞	19½	120,200	395,700	Penick & Ford	No	433,773	...	9 mo. 1.48	1.37
121⅜	121½	129⅜	118	126½	92⅜	401,020	2,419,600	Postum Co	No	1,467,365	5.00	6.62	7.71
88	88½	91	69½	71	55	130	4,110	Prophylactic Brush	No	100,000	4.50	6 mo. 6.56	5.34
50	50½	53⅜	49⅞	57	47	124,060	1,299,100	Schulte	No	1 116,145	8.00	6 mo. 2.41	4.82
85⅜	85⅞	92½	82½	91½	51	603,160	2,821,000	Sears & Roebuck	No	4,200,000	2.50	5.96	5.21
38⅞	39	40½	37⅜	41⅜	35½	339,420	2,274,700	Standard Oil of N. J	25	24,262,532	1.00		5.01
135½	135¼	150	134½	143⅜	90⅛	87,760	271,800	Sterling Products	No	625,000	6.00	9.76	8.65
15½	15¼	15⅞	11⅛	14	7	57,140	28,500	Sweets Am	50	111,773	...	9 mo. 0.32	0.42
193	193½	204½	190	200½	159	75,980	404,200	United Drug	100	380,638	9.00	9 mo. 7.87	13.02
59½	59⅞	60½	59	61	58½	36,600	84,020	pfd	50	651,270	3.50	9 mo. 7.40	11.11
108½	109	117⅜	102¾	111⅛	69	280,280	1,416,500	U. S. Ind. Alc	100	240,000	5.00	6.00	7.04
118½	121	120½	119	119	107½	570	785,900	pfd	100	60,000	7.00		35.19
62½	63	69½	58	63⅛	48	115,000	384,400	Vick Chem Co	No	400,000	4.00	3.44	3.31
23⅛	24	28⅛	21½	39½	20¼	95,560	1,028,300	Vivaudau	No	358,020	3.00	6 mo. 1.85	3.30
95	100	100	97½	118⅜	97	1,440	25,743	pfd	100	16,600	7.00	9 mo. 39.05	79.51
34½	34⅜	36½	34½	41⅜	26	6,200	197,500	White Rock	No	200,000	2.50	3.69	3.82
14⅜	14½	16	11½	17⅛	10	98,720	355,600	Wilson	No	434,983	...		...
180½	181	194	175½	198½	117⅜	340,340	1,839,900	Woolworth, F. W	25	2,600,000	6.00	9.06	10.81
70½	71	75	69¼	72¼	50¼	12,980	92,800	Wrigley	No	1,800,000	3.50	5.35	5.05
High	Low							NEW YORK CURB					
(e)19½		21⅞	19½	22	19½	13,600	72,600	Allison Drug Co	No	.....	...		...
(e)122	128	149¾	117¼	126	76½	5,920	20,000	Ches Mfg Co	25	120,000	4.00		...
26½	26½	29	23	26½	17½	21,440	75,100	Forhans	No	150,000	1.00	2.21	...
(e)22	22	23	21⅜	23½	18⅓	3,440	19,600	Hires	No	90,000	2.00	2.53	...
22½		26	20	21⅜	18	14,820	33,200	May Drug Stores	10	10,000	1.50		...
46	46	49	38½	39	37	2,960	2,100	Monsanto Chem	50	62,000	...	9 mo. 6.11	5.60
41	41	44	38	40	27⅜	6,340	17,000	Parke Davis & Co	25	949,577	2.00	1.54	7.50
54⅜	52½	54⅜	48	44½	28⅜	14,160	69,800	Peoples Drug Store	No	100,000	1.00		3.51
250	250	265	247	245	178	1,585	11,835	Proctor & Gamble	20	1,250,000	4.75		9.17
130½	129⅞	133	125	130	115½	10,880	26,860	Swift & Co	100	1,500,000	8.00	8.13	10.40
High	Low							CLEVELAND					
135	135	140	112½	105	70	539	1,018	Dow Chem Co	No	100,000	4.00		...
106	106	107	105	106½	100	142	639	pfd	100	18,297	7.00		...
								PITTSBURGH					
22	22	24½	20	22	17½	2,870		May Drug Stores	10	10,000	$1.50		...
								CHICAGO					
47½	47	50	38½	39	37	18,967	26,498	Monsanto Chem	50	62,000	...	9 mo. 6.11	5.60
(e)134½		149	117½	125½	61½	7,140	535,331	Montgomery & Ward	10	1,141,251	4.00	10.25	6.25
86	84½	92⅜	82½	91⅜	52	115,405	467,296	Sears & Roebuck	No	4,200,000	2.50	5 96	5.21
130	129½	132	124½	130	115½	15,872	(c)17,417	Swift & Co	100	1,500,000	8.00	8.13	10.43
70½	70½	74	69½	73	51	15,951	123,460	Wrigley	No	1,800,000	3.50	5.35	5.05
								CINCINNATI					
...	...	32½	31	131	96½	934	15,375	Coco Cola	No	500,000	7.00	9 mo. 9.64	16.5
(e)37⅜		39½	36	42⅜	36	1,928		Dow Drug Co	100	60,000	8.00		...
...	...	126½	126½	126	125	27		pfd	100	40,000	7.00		...
126	126	126	125	126¾	113½	114		Fleischmann	No	4,500,000	2.50	1,589.49	1,501.80
252	251½	275	249	250	177	6,232	43,825	Proctor & Gamble	20	1,250,000	4.75		9.17
								BOSTON					
130	130½	133	124⅜	130½	115	4,348	21,143	Swift & Co	100	1,500,000	8.00	8.13	10.4
59½	59⅜	61	59½	61	58½		23,151	United Drug 1st pfd					
								DETROIT					
...	...	...	...	16½	14½	325		Allison Drug Co	No	.....	...	9 mo. 2.03	...
...	...	...	...	*145	27			Parke Davis					
Bid	Asked							BALTIMORE					
110	112	113	110	114	103	60	788	Sharp & Dohme pfd	100	1,000,000	7.00		...
								UNLISTED					
...	...	...	...	29	11			American Solvents	No	160,000	...		...
106	109	...	...	109	102			Kolynos pfd	100	.....	8.00		...
70	...	...	...	71½	20			McKesson & Robbins	No	100,000	1.00		...
109½	111	...	...	110	98			M Kesson & Robbins pfd		115.000			
77	80	...	...	89	55			Mer k pld					
74	77	...	...	...	...			Mulford, H. K. & Co	50	54,823	3%		...
140	146	...	...	...	...			Newport Chem	1	912,198	4%		...
...	...	...	...	131	101			Squibbs	20	40,000	6.00		...
...	...	...	...	...	...			pfd	100	28,354	8.00		...
39½	41	...	...	...	...			Zonite Corp					

(e) Bid and Asked. (f) Thru Jan. '28. (*) Old Stock.

Prices Current

Medicinal, Aromatic, and Photographic Chemicals, Crude Drugs, Spices, Essential Oils and Concentrates, Miscellaneous Raw Materials, etc.

Chemical prices quoted are of American manufacturers, spot New York, f. o. b. for immediate shipment, unless otherwise specified.

Products sold f. o. b. works are so specified. Imported chemicals are so designated. Resale stocks, when a market factor, are indicated "second hand."

Crude Drugs and Essential Oils are quoted f. o. b. New York (Manhattan with limitations) for immediate shipment.

The range of price given is not "bid and asked," but are prices of different sellers, based on varying grades and/or quantities. Containers named are original packages most commonly sold.

Chemicals

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

Fine Chemicals

Acetanilid — A highly competitive market existing throughout the month has led to price shading, with reported buying as low as 26c lb. for U. S. P. Quoted market, however, is still at 28c lb. with demand good and in fair volume.

Acetone — Prevailing high prices for raw material has kept this commodity in a strong position. Demand continues good with much contract business reported being done. Quotations are at 14c @ 15c lb. for less than carload quantities, while carload lots are quoted at 13c lb.

Acid Acetylsalicylic — Producers are maintaining prices at 85c @ 90c lb., although it is said to be possible to secure limited quantities from outside sources at 80c @ 82c lb. for U. S. P. powdered. All large requirements, however, must be filled by producers, and these requests have been in sufficient volume to maintain quoted prices in very strong position.

Acid Carbolic — Prices are lower at 18c @ 20c lb., with some reported sales at 17c lb. Activity is rather meager although recently there has been some improvement in less than carload quantities.

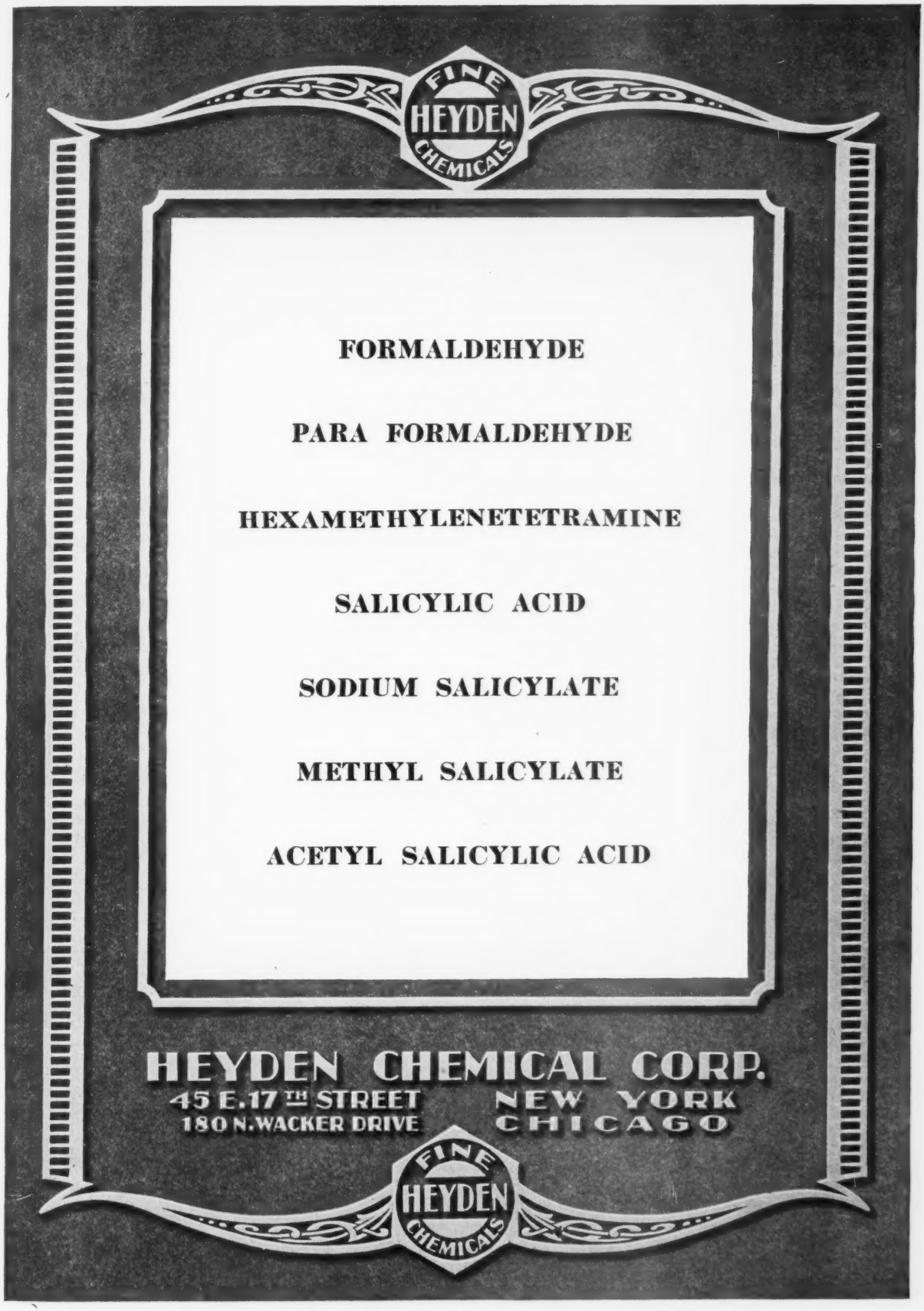
Acid Citric — Domestic prices remain unchanged with U. S. P. crystals at 44½c @ 45c lb. and powdered at 45½c @ 46c lb. Although activity is rather quiet now, domestic producers are maintaining quoted prices in anticipation of increased interest with the approach of Spring. There has been a considerable strengthening of the market abroad due to the re-establishment of a sales cartel, including practically all of the foreign producers. Consequently the present import price figures to 58c @ 60c lb., duty paid, with only limited quantities available for immediate delivery.

Acid Glycerophosphoric — Demand continues to be rather routine with no change from established prices of $1.40 @ $1.45 lb.

Acid Phosphoric — Quotations are a shade lower in the face of extremely keen competition, makers now quoting 15c @ 16c lb.

Acid Salicylic — Although makers are firm at 40c lb., sales are reported from

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Acetanilid, USP, 200 lb bbls	lb.	.....	.28	.28	.28	.36	.22
Acetone, CP, 350 lb drs wks		.14	.15	.15	.14	.14	.10½
Acetphenetidin, 225 lb bbls	lb.	.....	1.40	1.40	1.40	1.53	.80
Acids							
Acid, Acetylsalicylic, 225 lb	bbls.	.85	.90	.90	.85	.85	1918
Agaric, 1 oz vials	oz.	.....	3.50	3.50	3.50	3.50	.....
Arsenous, USP, 220 lb bbls	lb.	.....	.18	.18	.18	.19	.09
Benzoic, USP, 100 lb bbls	lb.	.60	.61	.61	.60	.60	.50
Boric, 100 lb kegs		.11½	.12	.12	11½	.11	.07
Cacodylic, 5 lb bot	lb.	.....	8.00	8.00	8.00	8.00	6.00
Camphoric, USP, VIII 1 lb bot	lb.	4.82	4.82	4.82	4.82	5.15	1917
Carbolic, USP, crys 112 lb tins	lb.	.18	.20	.21	.18	.18½	.07½
Chrysophanic, see Chrysarobin							
Cinnamic, 5 lb cans	lb.	3.25	3.50	3.50	3.25	.....	2.20
Citric, USP, crys 230 lb bbl	lb.	.44½	.45	.45	.44½	.44	.53
USP, crys imp. 112 lb keg	lb.	.58	.60	.60	.55	.52	.54
USP, powd 200 lb bbl	lb.	.45½	.46	.46	.45½	.45	.53½
Diethylbarbituric, 1 lb bot	lb.	.....	4.60	4.60	4.60	8.00	23.20
Gallic, USP, 150 lb bbls	lb	.....	.74	.74	.74	.73	1916
Glycerophosphoric, 25% 1 lb bot	lb.	1.40	1.45	1.45	1.40	1.40	2.00
Hydriodic, USP, 10% 5 lb bot	lb.	.....	.80	.80	.80	.70	.70
Hydrobromic, USP, 40% 155 lb cbys wks	lb.	.....	.55	.55	.55	.55	.40
Hypophosphorous, USP, 30%	lb.						
5 gal demis	lb.	.....	.85	.85	.85	.85	.45
Lactic, USP, VIII 100 lb cbys	lb.	.56	.62	.62	.56	.57	.45
USP, X 100 lb cbys	lb.	.....	.57	.57	.57	.62	.44
Phenylcinchonic	lb.	.....	4.50	4.50	4.50	4.75	.....
Phosphoric USP, Syr 70 lb drs	lb.	.15	.16	.16	.15	.16½	.20½
Pyrogallic, crys 5 lb cans	lb.	1.40	1.50	1.50	1.40	1.37	1.20
Resublimed, 5 lb cans	lb.	1.80	1.85	1.85	1.80	1.72½	1.20
Salicylic, USP, 100 lb bbls	lb.	.....	.40	.41	.40	.40	.22½
Succinic, 100 lb bbls	lb.	.....	1.35	1.35	1.35	1.55½	2.75
Sulfurous, USP, 6% 100 lb cbys	lb.	.05	.06	.06	.05	.05	1918
Tannic, USP, fluffy 50 lb bbls	lb.	.08	.85	.85	.80	.87½	.50
Powd 200 lb bbls	lb.	.90	.93	.93	.90	.78½	.55
Tartaric, USP, imp 240 lb bbls	lb	.....	.36	.37	.35	.....	.30½
USP, imp 300 lb bbls	lb.	.37	.38	.38	.34½	.....	.30½
Powd, 240 lb bbls	lb.	.....	.35	.36	.35	.....	.30½
Aconitine, Alk, crys 1 oz vials	oz.	.....	30.00	30.00	30.00	30.00	1918
Amorphous, 1 oz vls	oz.	.....	20.00	20.00	20.00	20.00	1918
Adeps Lanae, hyd 350 lb bbls	lb.	.15	.16	.16	.15	.16	1918
Anhydrous, 350 lb bbls	lb.	.16	.17	.17	.16	.17	1918
Agaricin, 1 oz vls incl	oz.	.....	2.32	2.32	2.32	2.10	.55
Alcohol							
Alcohol, Benzyl, 5 lb bot	lb.	1.25	1.35	1.55	1.25	1.45	.....
Ethyl, USP, 190 pf 50 gal bbls	gal.	2.70½	2.75½	2.75½	2.70½	3.70	2.50
Pure tax free	gal.	.65	.72	.77	.65	2.50	.80
Grain drums	gal.	3.90	4.00	4.00	3.90	3.82½	Nom.
Denatured, drums barrels							
No. 1 spec.	gal.	.43	.50	.55	.43	.....	.....
1 comp.	gal.	.44	.51	.56	.44	.....	.....
No. 5 spec.	gal.	.43	.50	.55	.43	.....	.....
comp.	gal.	.44	.51	.56	.44	.....	.....
23 a, spec	gal.	.56	.63	.68	.56	.....	.....
39 b, spec	gal.	.57	.64	.69	.57	.....	.....
40, spec	gal.	.52½	.59½	.64½	.52½	.....	.....
Isopropyl refd 98-99% drs	gal.	1.25	1.50	1.50	1.25	1.25	.....
Phenylethyl, 1 lb bot	lb.	8.00	10.00	10.00	8.00	8.00	.....
Aloin, USP, 100 lb cases	lb.	.90	.95	.95	.90	.90	.68
Aluminum Acetotartrate kegs	lb.	.....	1.60	1.60	1.60	1.60	1.10
Amidopyrine, 10 lb boxes	lb.	4.40	4.60	4.75	4.40	4.64	.....
Ammonium Salts							
Ammonium Acetate 100 lb kegs	lb.	.34	.36	.38	.34	.36	.28
Benzoate, USP, 1 lb bot	lb.	.....	1.27	1.27	1.27	1.27	.90
Borate, 10 lb bot	lb.	.....	.35	.35	.35	.35	.60
Bromide, USP, 450 lb bbls	lb.	.48	.50	.50	.48	.48	.48
Imported, 112 lb boxes	lb.	.48	.50	.50	.48	.50½	.49
Carb., USP, lump 100 lb kegs	lb.	.....	.13½	.13½	.13½	.13½	.08½
USP, powd 100 lb kegs	lb.	.....	.14½	.14½	.14½	.14½	.09½
Citrate, 100 lb kegs	lb.	.85	.90	.90	.85	.85	.70
Ichthyolate, as to brand	lb.	4.00	4.50	4.50	4.00	4.85	3.25
Iodide, USP, 25 lb jars	lb.	.....	5.20	5.20	5.20	5.20	3.70
Phosphate, dibasic 250 lb bbls	lb.	.43	.45	.48	.43	.48	.12
Salicylate, USP, 100 lb kegs	lb.	.....	1.15	1.15	1.15	.96½	.40
Valerate, USP, 25 lb jars	lb.	2.75	2.90	2.90	2.75	2.75	1.25
Amylene Hydrate, 1 lb bot	lb.	.....	7.10	7.10	7.10	7.10	5.40
Antipyrine, USP, 100 lb cans	lb.	1.55	1.65	1.75	1.55	1.75	2.00
Apomorphine Hydrochloride, ¼ oz. vials	oz.	.....	35.80	35.80	35.80	23.80	10.40
Arecoline Hydrobrom, 1 oz vials	oz.	7.75	8.75	11.45	7.75	8.37	7.10
Aspirin see Acid Acetylsalicylic							
Aspidospermine Amorphous	oz.	.....	15.00	15.00	15.00	15.00	15.00
Atropine Alk, USP, 1 oz vials	oz.	.....	9.10	9.10	9.10	6.93	7.25
Methyl bromide, 1 oz vials	oz.	.....	25.00	25.00	25.00	25.00	20.00
Sulfate, 5 oz cans	oz.	.....	3.00	3.00	3.00	3.00	6.10
Single ounce	oz.	.....	3.15	3.15	3.15	3.15	6.25
Barium Iodide, 5 lb box	lb.	.....	5.15	5.15	5.15	5.15	4.95
Sulfate, X-ray diagn bbls	lb.	.09½	.10	.10	.09½	.09½	.11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Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

outside sources at 38c lb. There are no large quantities available except direct from producers, and consequently there is little possibility of decline in quoted prices.

Acid Tartaric — The fact that little of the imported material is available, and that foreign producers recently advanced prices, has advanced price quotations on the imported product to 37c @ 38c lb. This price is still higher than domestic, with latest advices reporting foreign makers unable to take on new business for shipment before September. Imports of tartaric acid of German origin during 1927 amounted to 2,757,937 pounds, according to recently released figures of the Department of Commerce. This compares with 1,575,016 pounds imported during the previous year.

In sympathy with higher imported prices, domestic makers announced an advance of 1c lb., thus establishing prices of 36c lb. for all grades in barrels. As this price is still lower than the imported figure, further advances would not be surprising in view of the firm foreign position.

Adeps Lanae — Demand has been rather dull recently which has led to some price shading depending upon quality. Quotations on the best grades, however, remain firm at 15c @ 16c lb. for hydrous and 16c @ 17c lb. for anhydrous.

Alcohol — All distillers announced a decrease of 5c gal. on all grades for spot orders. This brings spot and contract goods to the same price. Makers will not quote on any quantities beyond March 31. According to present schedule, No. 1 and No. 5 special denatured, are quoted at 43c gal. in drums and 50c gal. in barrels, with completely denatured 1c gal. higher in each case. Other grades of special denatured in drums are quoted as follows: 23a, 56c gal.; 39b, 57c gal.; and 40 at 52½c gal. The market is said to be stronger at these lower prices. Reduction is reported due to pressure exerted by buyers. Extremely large buyers had been purchasing at these new prices even when the old schedule was in effect and consequently the reduction was made in order to remove this discrimination and put all buyers in the same position. No quotations are being made, however, beyond March 31, for after that time producers expect gradual advances.

Amidopyrene — The market is reported as being firmer and with steady demand. Prices which had been somewhat lower, were firm again at $4.40 @ $4.60 lb.

Antipyrine — Although requests have been active, there has been little demand by consumers which resulted in a slight

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Bay Rum Porto Rico, 45 gal bbls	gal.	.80	.85	.80	.80	.....
Domestic syn. 50 gal bbl	gal.	.65	.70	.65	.65	.....
St. Thomas, 50 gal bbls	gal	.80	.85	.80	.81	.....
Benzonaphthol, 5 lb boxes	lb.	2.50	2.60	2.50	2.50	.89
Benzoyl Chloride, 500 lb dr	lb.	.....	1.00	1.00	1.00	1.00
Benzyl Benzoate, Medicinal FFC	lb.	.....	1.40	1.40	1.75	1.25
Chloride Redis, 160 lb cby	lb.	.30	.35	.35	.30	1.50
Formate, 1 lb bot	lb	3.25	3.50	3.50	3.25	3.25
Succinate, 160 lb cby	lb.	.....	5.25	5.25	5.25	4.63
Bismuth						
Bismuth, metal 100 lb cases	lb.	2.13	2.25	2.25	2.00	2.49
Ammon. Citrate, USP, 5 lb cans	lb.	.....	5.65	5.65	5.50	5.70
Betanaphthol ate, 5 lb box	lb.	3.30	3.35	3.35	3.30	3.30
Citrate, USP, 5 lb cans	lb.	.....	2.95	2.95	2.75	2.81
Chloride	lb.	.....	3.40	3.40	3.15	3.55
Hydroxide	lb.	.....	3.30	3.30	3.05	3.12
Nitrate, 25 lb jars	lb.	.....	1.95	1.95	1.85	1.96
Oxide anhydrous	lb.	.....	3.70	3.70	3.55	3.61
Oxychloride, 25 lb boxes	lb.	.....	3.35	3.35	3.10	3.20
Salicylate, 25 lb boxes	lb.	.....	1.95	1.95	1.80	1.92
Subcarbonate, USP, 25 lb boxes	lb.	.....	2.70	2.70	2.43	2.98
Subcarbonate, X-ray diag 1 lb bottles	lb.	.....	3.65	3.65	3.40	3.50
Subgallate, USP, 25 lb boxes	lb.	.....	2.70	2.70	2.55	2.61
Subiodide, 5 lb lots	lb.	.....	4.40	4.40	4.20	4.31
Bismuth						
Subnitrate, USP, 25 lb jar	lb.	.....	2.30	2.30	2.20	2.30
Subsalicylate, USP, 25 lb boxes	lb.	.....	3.15	3.15	2.90	3.06
Tannate	lb.	2.60	2.65	2.65	2.60	2.60
Borax, crys USP, 400 lb bbls	lb.	.04½	.05	.05	.04½	.04½
Bromine, N F, 6 lb bot	lb.	.....	.45	.45	.45	.46
Bromoform, USP, 5 lb bot cases	lb.	1.65	1.90	1.90	1.65	1.65
Brucin Alk., 100 oz tins	lb.	.04	.05½	.05½	.04	.08
Sulfate, 100 oz tins	lb.	.04	.05½	.05½	.04	.08
Butylchloral Hydrate bot	lb.	4.00	5.00	5.00	4.00	4.00
Butyric Ether, absolute 25 lb cans	lb.	1.10	1.20	1.20	1.15	.....
Cadmium Salts						
Cadmium Bromide, jars 50 lb	lb.	1.15	1.20	1.20	1.10	.....
cases wks	lb.	1.05	1.10	1.10	1.05	1.15
Iodide, 10 lb bot	lb.	.....	4.45	4.45	4.45	4.45
Metal Sticks, 100 lb. cases	lb.	.65	.75	.75	.65	.67½
Sulfide cases	lb.	1.20	1.25	1.25	1.20	1.20
Caffeine						
Caffeine Alk, USP, 1 100 lb kegs	lb.	2.90	3.05	3.20	2.90	3.
Citrated, 50 lb cans	lb.	2.00	2.25	2.25	2.00	2.53
Hydrobromide, 1 lb bot	lb.	4.80	5.00	5.00	4.65	4.65
Hydrochloride, 1 lb bot	lb.	6.05	6.55	6.55	6.05	6.05
Sulfate, 1 lb bot	lb.	5.40	5.90	5.90	5.40	5.40
Sodium Benzoate, tins	lb.	.....	3.05	3.05	3.0	3.20
Salicylate, tins	lb.	.....	2.95	2.95	2.95	3.10
Calcium Salts						
Calcium Bromide, 100 lb cs	lb.	.....	.60	.60	.60	.60
Carb, USP, 175 lb bbls	lb.	.04½	.06½	.06½	.04½	.06
Glycerophos, 250 lb bbls	lb.	.....	1.40	1.40	1.40	1.40
Hypophes, USP, 25 lb cans	lb.	.60	.65	.65	.60	.60
Iodide, 5 lb bottles	lb.	.....	4.35	4.35	4.35	4.35
Lactate, USP, 500 lb bbls	lb	.45	.50	.50	.45	.52
Lactophosphate Soluble. Crystals tins	lb.	.....	1.20	1.20	1.20	1.20
Powdered tins	lb.	.....	1.00	1.00	1.00	1.00
Insol. powd tins	lb.	.....	.50	.50	.50	.50
Sulfide, USP, 100 lb drs	lb.	.20	.25	.25	.20	.....
Camphor						
Camphor, American Refined 250 lb bbls	lb.	.....	.70½	.70½	.61	.68
Slabs, 100 lb cs	lb.	.....	.70½	.70½	.63	.71½
1 oz tab, 100 lb cs	lb	.....	.74½	.74½	.70	.72
Jap. ref. slabs, 100 lb cs	lb.	.....	.66	.66	.57	.64
Refined powd	lb.	.....	.70	.70	.62	.72
½ oz tab, 100 lb cs	lb.	.....	.75	.75	.68	.74
Liniment, bbls	gal.	2.20	2.30	2.30	2.20	2.25
Monobrom, 100 lb cs	lb.	1.85	1.90	1.90	1.85	1.85
Caramel, 40 gal bbls	gal.	.....	.63	.63	.63	.63
50 gal bbls	gal.	.....	.63	.63	.63	.63½
Carmine, No. 40, 5 lb boxes	lb.	5.00	5.15	5.15	5.00	5.00
Casein edible, 100 lb kegs	lb.	.45	.55	.55	.45	.45
Chalk						
Chalk drop, 175 lb bbls	lb.	.....	.03½	.03½	.03½	.03
Precip light, 250 lb csk	lb.	.....	.04½	.04½	.04½	.04½
Heavy 540 lb csks	lb.	.02½	.03½	.03½	.02½	.02½
Bulk	ton	.....	5.00	5.00	5.00	5.00
English, 7 lb bags	lb.	.....	.08½	.08½	.08½	.08½
Charcoal Animal medicinal jars incl	lb.	.....	.50	.50	.50	.50
Charcoal						
Wood, powd, 100 lb bbls	lb.	.05½	.06	.06	.05½	.05½
Chloramine, USP, 200 lb bbls	lb.	.....	1.75	1.75	1.75	1.75
Chlorcosane, 5 lb bot	lb.	.55	.65	.65	.55	.55
Chloroform, USP, 50 lb drs	lb.	.28	.30	.30	.28	.30
Chloral Hydrate, USP, 25 lb jars	lb.	.70	.75	.75	.70	.77
100 lb drums	lb.	.65	.70	.70	.65	.....
Cholesterin	lb.	4.00	4.56	4.56	4.00	4.00
Chromium Sulfate Scales, tins	lb.	.55	.60	.60	.55	.55
Powdered tins	lb.	.60	.65	.65	.60	.30

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Pilocarpine Nitrate
Hydrastine Sulphate
Acid Diethylbarbituric
Colchicine Amorphous
Berberine Sulphate Acid
Arecoline Hydrobromine
Veratrine Hydrochloride
Hydrastine Hydrochloride
Berberine Sulphate Neutral
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Berberine Hydrochloride
Yohimbin Hydrochloride
Pilocarpine Hydrochloride
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Strychnine Sulphate Powder
Apomorphine Hydrochloride
Hyoscymine Sulphate Crystals
Ethylmorphine Hydrochloride

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17-19-21 CLIFF STREET, NEW YORK, N. Y.

price decline. Quotations are now at $1.55 @ $1.65 lb. Accumulation of unsold stocks also contributed to effect this price decline.

Bay Rum — Prices have evidently become stabilized for this commodity. Importers claim a very firm market and see no reason for any change as movement to buyers is consistently active, preventing any accumulation of stocks. Imported grades are quoted at 80c @ 85c gal., while domestic product is at 65c @ 70c gal.

Bismuth — The metal market weakened somewhat during the past month from the strong position which it held when last reported here. This was due to the lessened activity following the price advance which was noted at that time. Markets all over the world are reported gaining strength at the lower prices now quoted of $2.13 @ $2.25 lb. Subnitrate, U. S. P. is still held at $2 30 lb. on makers' schedules, but stocks of guaranteed U. S. P. material are said to be available as low as $2.15 @ $2.20 from outside holders.

Brucine — Alkaloid and sulfate have been rather easy in a highly competitive markets with quotations at 4c @ 5½c lb. Demand is small and buyers are only purchasing for immediate needs.

Caffeine Alkaloid — The market has adopted a routine position with little and irregular buying being done as most large purchasers have their needs taken care of on contract. Prices are firm with no evidence of shading. Quotations are now at $2.90 @ $3.05 lb. depending upon quantity.

Camphor — A real advance in price has occurred in this market and a more complete and intensive review of circumstances leading to the present situation will be found elsewhere in these pages. Briefly, a real shortage now exists in Japan. Tired of the overproduction which has existed for many years bringing them resulting low prices, the producers have sharply curtailed production. As a result it is now impossible to buy from Japanese market as all stocks through May shipment have already been sold. The only source are importers here who have spot stocks which they are quoting at 66c lb. for slabs; 70c lb for powdered; and 75c lb for tablets. Domestic grades are also quoted higher in sympathy with this advance. Slabs and powdered are at 70½c lb., while tablets are at 74½c lb.

Camphor Monobromated — Despite higher prices existing on the schedules of camphor producers, the makers of monobromated continue to quote $1.85 @ $1.90 lb.

Cocoa Butter — Demand continues steady and the primary market is strong

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Chrysarobin, 50 lb tins	lb.	3.65	3.75	3.75	3.65	3.65	2.40
Cinchonine Alk, 100 oz tins	oz.	.....	.38	.38	.38	.38	.08
Crystal	oz.	.65	.68	.68	.65	.65	.13
Sulfate, 100 oz tins	oz.	.....	.25	.25	.25	.25	.06
Cinchonidin Sulfate, 100 oz tins	oz.	.....	.35	.35	.35	.35	.15
Resale, 100 oz lots	oz.	.32	.33	.33	.32	.32	.....
Cocaine Alk, USP, 1 oz vial	oz.	.....	11.07	11.07	11.07	10.65	3.85
Hydrochloride, USP, 1 oz vial, 25 oz lots	oz.	.....	8.50	8.50	8.50	.....	2.65
Cocoa Butter, 12 lb boxes	lb	.46	.48	.50	.46	.50	.35
Codeine							
Codeine Alk, 1 oz vials, 10 lots	oz.	.....	10.87	10.87	10.87	9.90	5.75
Hydrobromide	oz.	.....	7.92	7.92	7.92	7.92	5.50
Hydrochloride	oz.	.....	9.87	9.87	9.87	8.90	5.50
Nitrate, oz vl 10 oz lots	oz.	.....	8.80	8.80	8.80	8.80	5.50
Phosp. oz vl, 10 oz lots	oz.	.....	8.42	8.42	8.42	7.60	5.25
Salicylate	oz.	.....	7.25	7.25	7.25	7.25	5.25
Sulfate, oz vl, 10 oz lots	oz.	.....	8.92	8.92	8.92	7.69	5.50
Cod Liver Oil							
Cod liver Oil Nor., 30 gal bbls	bbl.	44.50	46.50	46.50	38.00	38.25	17.00
Newfoundland	bbl.	.....	46.00	46.00	46.00	45.60	62.50
Colchicino Alk, USP, 1 oz vl	oz.	.....	20.00	20.00	20.00	20.00	28.15
Salicylate, 1 oz vls	oz.	.....	35.50	35.50	35.50	35.50	20.00
Collodion, USP, 30 lb drs	lb.	.....	.23	.23	.23	.23	.22
600 lb drums	lb.	.....	.22	.22	.22	.22	.27
Flexible drums	lb.	.24	.25	.25	.24	.24	.33
Copper Acetate Normal, CP, jars incl	lb.	.....	.75	.75	.75	.75	.35
Arsenite, tins	lb.	.....	.39	.39	.39	.40	.75
Iodide, 5 lb bot	lb.	.....	5.65	5.65	5.65	5.65	4.40
Corn Syrup, 42 deg. 50 gal bbls	100lb.	3.66	3.91	3.91	3.31	3.31	2.16
Cream Tartar, USP, 300 lb bbls	lb.	.26¾	.27	.27	.26	.25	.24
Imp. powd. 224 lb bbls	lb.	.25¾	.26	.27¾	.25¼	.25	.24
Creosote, USP, 42 lb cbys	lb.	.40	.42	.42	.40	.40	.51
Carbonate, 150 lb.	lb.	1.50	1.60	1.60	1.50	1.60	1917
Cresol, USP, 400 lb drums	lb.	.....	.20	.20	.20	.22	.53
500 lb drums	lb.	.....	.20	.20	.20	.21	.07
Diethyl Phthalate, 25 lb cn	lb.	.....	.40	.40	.40	.40	.....
1000 lb drums	lb.	.24	.25	.25	.24	.27	.....
Digitalin							
Digitalin Pure, 1 oz vial	oz.	15.00	15.50	15.50	15.00	10.63	6.25
Dionin, see Morphine Ethyl		.....	.....	.....	.....	.....	.....
Dover's Powder, USP, 5 lb tin	lb.	.....	1.65	1.65	1.65	1.65	26.00
Duboisine Sulfate, 1 oz vl	oz.	.....	30.07	30.07	30.07	30.85	1918
Emetine Alk, 15 gr vial	oz.	.....	.85	.85	.85	.07	45.00
Hydrochloride, USP, 1 oz vl	oz.	35.00	36.00	36.00	35.00	32.70	1.80
15 grain vials	oz.	2.50	2.70	2.70	2.50	2.50	1.00
Epsom Salts, USP, 200 lb bbls	100 lb.	2.25	2.50	2.50	1.85	1.95	1.00
Imp. 100 lb bbls	100 lb.	1.95	2.00	2.00	1.95	7.60	5.50
Ergotin Bonjean, 1 lb jars	lb.	.....	35.00	35.00	35.00	35.00	41.50
Eserine Alk, 1 oz vials	oz.	.....	40.00	40.00	40.00	40.00	25.50
Salicylate, 1 oz vials	oz.	.....	40.00	40.00	40.00	40.00	25.50
Sulfate, USP, VIII 1 oz vials	oz.	.....	40.00	40.00	40.00	.....	.....
Ether							
Ether, USP, 55 lb drums	lb.	.....	.16	.16	.15	.13	.16
Anaesthesia, 55 lb drums	lb	.....	.21	.21	.20	.19	.16
USP, 1880 55 lb drums	lb	.....	.38	.38	.37	.....	.24
Nitrous, 1 lb bot	lb.	.....	.95	.95	.95	.91	.48
Ethyl Chloride, 200 lb bot	lb.	.24	.25	.25	.24	.24	.....
Ethyl Iodide, 5 lb bot	lb.	.....	6.25	6.25	6.25	6.25	4.75
Formaldehyde, USP							
100 lb cbys 1c-1 wks	lb.	.08	.09	.09	.08¾	.11	.09¼
Furfural, 500 lb drums	lb.	.....	.17½	.17½	.17½	.17½	.....
Gall Extract	lb.	.20	.21	.21	.20	.20	.....
Gelatin, USP, Silver, 100 lb. cs	lb.	.55	.60	.60	.55	.60	.....
Pure Food, 50 lb bbls	lb.	.53	.55	.55	.53	.55	.....
Sheets	lb.	.....	.....	.....	.....	.53	.....
Glucose, (grape sugar) dry 70° bags c-l NY	100 lb.	3.14	3.24	3.24	3.14	3.14	.....
Glycerin							
Glycerin, CP 550 lb drums	lb.	.16	.16½	.19	.16	.25	.19¼
Goa Powder, see Chrysarobin							
Glycyrrhizin Ammon, tins	lb.	.....	3.00	3.00	3.00	3.00	1.85
Gold Chloride, bottles	oz.	12.00	12.50	12.50	12.00	12.00	10.15
Guaiacol, liq. USP, 100 lb cbys	lb.	1.75	2.25	2.25	1.75	1.75	1.60
Crystals	lb.	2.25	2.50	2.50	2.25	2.25	2.75
Benzoate, 1 lb bottles	lb.	.....	13.00	3.00	13.00	13.00	.....
Carbonate, 5 lb boxes	lb.	1.80	2.50	2.50	1.80	2.50	2.55
Haarlem Oil, bot 6 gr cases	gr	.....	3.25	3.25	3.25	3.25	1.67
Imported, 5 gross cases	gr.	.....	3.50	3.50	3.50	3.50	1.65
Halazone, 5 lb bot	lb.	2.75	3.25	3.25	2.75	2.75	.....
Hexamethylene							
Hexamethylenetetramine, USP, 100 lb drums	lb.	.52	.56	.56	.52	.60	1918
Homatropine Hydrobrom, USP	oz.	.....	14.50	14.50	14.50	14.50	87.00
5 oz and 1 oz vials	oz.	.....	13.50	13.50	13.50	13.50	87.00
Hydrastine Alk, USP, 1 oz vial	oz.	20.50	21.00	21.00	20.50	20.50	21.50
Hydrochlide, USP, 1 oz vials	oz.	20.50	21.00	21.00	20.50	20.50	21.50
Sulfate, 1 oz vial	oz.	22.5C	23.00	23.00	22.50	25.07	22.50
Hydrastinine Hydrochloride, USP, 15 gr vials	oz.	.....	40.0C	40.00	40.00	40.00	.....
Hydrogen Peroxide, USP, soln 375 lb bbls	lb.	.04	.05	.05	.04	.04	.03¼
Hyoscine Hydrobrom, USP, 1 oz vials	oz.	.....	13.57	13.57	13.57	13.57	51.00
5 oz, 1 oz vials	oz.	13.07	13.57	13.57	13.07	13.07	.....
Hyoscyamine Alk, crystals, 1 oz vials	oz.	.....	25.07	25.07	25.07	25.07	14.00
Amorphous, 1 oz vial	oz.	.....	75.07	75.07	75.07	75.07	55.00
Hyoscyamine							
Hydrobromide, USP, 1 oz vial	oz.	.....	35.07	35.07	35.07	35.07	13.00
Sulfate, 1 oz vial	oz.	.....	25.07	25.07	25.07	25.07	13.00
Hypoquinone, 100 lb kegs	lb.	.....	1.25	1.25	1.25	1.25	.53
Ichthyol, tins	lb.	4.00	4.25	4.25	4.00	4.00	1918
Iodide Arsenous, 5 lb bot	lb.	.....	5.20	5.20	5.20	5.20	3.70
Arsenous-Mercuric soln, 5 lb bottles	lb.	.....	.26	.26	.26	.26	.16

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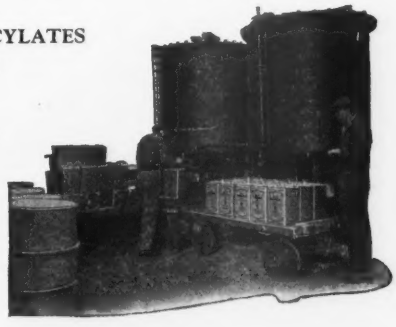

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FINE AND MEDICINAL CHEMICALS ∾ TECHNICAL CHEMICALS ∾ INTERMEDIATES

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

but there have been no price changes since last reported here. Quotations remain at 46c @ 48c lb.

Cod-liver Oil—Due to continued poor reports from Norway fisheries, spot prices have advanced further during the past month, now being quoted at $44.50 @ $46.50 bbl., despite the fact that demand has been light. Consumers are supplied with enough oil for their present needs and are not buying as yet. Latest reports from Norway indicate that not only is the catch smaller this year than at the corresponding period of last year, but also that meager livers have reduced the oil production more than proportionally. Consequently, while 17,500 hectoliters of oil had been produced by March 6 of last year, only 8,500 hectoliters had been reported this year, on the corresponding date. Thus the yield so far is only one-half of that of last year, which in turn was a comparatively poor year. Ever since 1925 cod-livers have gradually declined in size and fatness, and this year will evidently be no exception.

Corn Syrup — Higher prices on raw material, increased cost of production and heavy demand combined to bring about a considerable increase in the price of this commodity during the past month. Forty-two degree syrup is now quoted at $3.66 @ $3.91 in a strong market.

Cream of Tartar—In sympathy with the general strong movement in tartar products abroad, importers here advanced their price to 25½c @ 26c lb. in a firm market. Domestic producers continue to quote 26¾c @ 27c lb. Imports during 1927 of cream of tartar from Germany amounted to 259,357 pounds according to the Department of Commerce. This compares with 247,109 pounds imported during the previous year.

Creosote Carbonate—Keen competition and rather slack demand lead to some price shading in this commodity which in turn resulted in lowered quotations. Even at lower prices consumers are showing but little interest. Quotations are now at $1.50 @ $1.60 lb.

Ether — Producers advanced prices 1c lb. in the face of a very active demand.

Glycerin — There is a general feeling that conditions are improving and that prices have reached their lowest point, although the market is still weak. Buyers refuse to show interest, evidently expecting further reductions, while sellers do not appear anxious to sell, apparently waiting higher prices. CP is now at 16c @ 16½c lb.

Guaiacol Carbonate — Keen competition led to considerable shading and finally a decline in price during the past month. The market at present seems

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Iodine, crude, 200 lb kegs	lb.	4.20	4.25	4.25	4.20	3.30
Resublimed, 10 lb tars	lb.	4.65	4.70	4.70	4.65	3.55
Tincture demis	gal.	4.55	4.65	4.65	4.55	4.65	.....
Iodoform, powd 10 lb bot	lb.	....	6.00	6.00	6.00	6.00	4.00
Iron Salts							
Iron & Ammonium Citrate, USP, 50 lb cans	lb.	.64	.66	.66	.64	.67½	.54½
& Ammonium Oxalate, 25 lb box	lb.	.36	.38	.38	.36	.36	.28
& Ammonium Sul, CP, jars incl	lb.	....	.25	.25	.25	.27	.20
Bromide	lb.	1.10	1.22	1.22	1.10	1.10	.65
Carbonate Mass, (Blaude 100 lb bags)	lb.	.....	.18	.18	.18	.30	.18
Cacodylate, 100 lb bot	lb.	.....	7.50	7.50	7.50	8.00	16.00
Chloride, USP, lump 400 lb bbls	lb.	.06	.08	.08	.05½	.05½	.06½
Citrate, USP, VIII 25 lb can	lb.	.94	1.01	1.01	.94	.94	.55½
Hypophosphite, 5 lb cans	lb.	1.55	1.65	1.65	1.55	1.55	1.10
Iodide, 1 lb bottles	lb.	.....	4.28	4.28	4.28	4.28	2.40
Nitrate, kegs	lb.	.....	.36	.36	.36	.09	.50
Oxalate, Scales, 25 lb cans	lb.	.....	.65	.65	.65	.88	.....
Phosphate, USP, 50 lb cans	lb.	.....	.69	.69	.69	.69	.54½
& Potas Oxalate, 250 lb bbl	lb.	.....	.49	.49	.49	.49	.26
& Potas Tartarte, tins	lb.	.....	.88	.90	.90	.88	.55
Pyrophosphate, USP, 50 lb	lb.	.74	.80	.80	.74	.74	.54½
& Sod Oxalate, 24 lb box	lb.	.....	.30	.30	.30	.32½	.28
Sulfate, USP, crys bbls	lb.	.04½	.04	.04	.04½	.04½	.03½
Ferrous dried bbls	lb.	....	.08	.08	.08	.08	.06
Valerate, tins	lb.	2.75	3.00	3.00	2.75	2.75	1.30
Jalap Resin, USP lumps, 5 lb tins	lb.	.....	4.00	4.00	4.00	4.00	.....
Powdered, tins	lb.	....	4.65	4.65	4.65	4.65	.....
Lead Acetate, USP, 100 lb kegs	lb.	.15	.18	.18	.15	.15½	.14
Iodide, USP, VIII 5 lb bot	lb.	3.20	3.40	3.40	3.20	3.20	2.50
Lecithin, 5 oz jars	oz	1.00	1.30	1.30	1.00	1.00	.95
Licorice Ext Mass, cases	lb	.14	.20	.20	.14½	.14½	1918
Compound powder, bbls	lb.	.11	.13	.13	.11	.11	.16½
Powdered	lb.	.28	.34	.34	.28	.27	.29
Lithium Carbonate, 250 lb bbls	lb.	1.50	1.60	1.60	1.50	1.50	.67
Citrate, USP, 100 lb kegs	lb.	.....	1.70	1.70	1.70	1.70	1918
Iodide, 5 lb. bottles	lb.	.....	5.40	5.40	5.40	5.40	4.10
Lobeline Sulfate, ¼ oz vial	oz.	.....	8.75	8.75	8.75	6.25	.....
Luminal, see Phenylethylmalonylurea							
Magnesium Salts							
Magnesium Carbonate, USP, 100 lb bbls	lb.	.....	.12	.12	.12	.12	.05½
English, oz blocks	oz.	.16	.18	.18	.16	.16	.....
Glycerophosphate, 5 lb tins	lb.	3.20	3.25	3.25	3.20	3.20	2.13
Hypophosphite, 5 lb cans	lb	.....	1.05	1.05	1.05	1.05	1.15
Oxide, USP, light 100 lb bbls	lb.	.....	.42	.42	.42	.42	.22
USP, heavy 250 lb bbls	lb.	.....	.50	.50	.50	.50	.27
Salicylate, 100 lb kegs	lb.	....	1.10	1.10	1.10	.49	.70
Stearate, bbls	lb	.23	.25	.25	.23	.23	.....
Manganese Dioxide, precip. 100 lb kegs	lb	.40	.50	.50	.40	.....	.40
Glycerophosphate, 5 lb tins	lb.	2.90	3.00	3.00	2.90	2.90	1918
Hypophosphite, USP, VIII 5 lb cans	lb.	1.35	1.40	1.40	1.35	1.35	1.10
Iodide, 1 lb bottles	lb	6.40	6.65	6.65	6.40	6.40	4.35
Sulfate, N. F.	lb.	.....	.27	.27	.27	.27	.26
Menthol, USP, 60 lb cases	lb.	4.10	4.35	4.50	4.10	4.30	2.95
Synthetic, cases	lb.	3.25	3.50	3.50	3.25	3.37½	.....
Mercury							
Mercury Metal, 75 lb flasks	fl.	120.00	121.00	127.00	120.00	116.67	37.50
Bichloride, crys 25 lb box	lb.	.....	1.81	1.81	1.81	1.58	.55
Gran powd, 100 lb kegs	lb.	.....	1.65	1.65	1.65	1.51	.52
Bisulfate, 25 lb boxes	lb.	.....	1.62	1.62	1.62	1.57½	.42
Blue Mass, 25 lb boxes	lb.	.....	1.03	1.03	1.03	.90	.40
Powd, 25 lb boxes	lb.	.....	1.04	1.04	1.04	.95	.45
Blue Ointment USP, 50%, 25 lb cans	lb.	.....	1.29	1.29	1.29	.87½	.....
Dilute 30%, 25 lb cans	lb.	.....	.92	.92	.92	.86½	.35
33⅓% mercury	lb.	.....	.94	.94	.94	.35	.35
Calomel, 50 lb boxes	lb.	.....	2.05	2.05	2.05	1.88	.60
English	lb.	2.75	2.80	2.80	2.75	1.90	.58
Iodide, green, 25 lb jars	lb.	.....	4.80	4.80	4.80	4.54	2.45
Red, USP, 25 lb jars	lb.	.....	4.89	.489	4.89	4.61	2.70
Yellow, USP, VIII, 25 lb jars	lb.	4.80	4.80	4.80	4.80	4.50	2.45
Red precip, USP, 25 lb boxes	lb.	2.17	2.17	2.17	2.17	1.92	.75
Powd., USP, 25 lb boxes	lb.	2.17	2.17	2.17	2.17	1.98	.81
White precip, USP, 25 lb boxes	lb.	.....	2.20	2.20	2.20	2.03	.75
Powd., USP, 25 lb boxes	lb.	.....	2.25	2.25	2.25	2.25	.81
Salicylate, 25 lb bot	lb.	.....	2.32	2.32	2.32	2.32	1.50
With chalk, USP, 25 lb boxes	lb.	.....	.93	.93	.93	.87	.39
Methanol (Wood Alcohol), Pure 1c-1 drs	gal.	.....	.60	.60	.60	.....	.....
Methyl Salicylate							
Methyl Salicylate, USP, 50 lb cans	lb.	.....	.42	.42	.42	.45	1918
Methylene Blue, USP, med 5 lb cans	lb.	2.00	*2.05	2.05	2.00	1.70	1.00
Milk powd, 150 lb bbls	lb.	.14	.15	.15	.14	.14	.11
Morphine Alk, USP, 5 oz tin	oz.	.....	10.15	10.15	10.15	9.32	1918
Acetate, 5 oz tins	oz.	.....	8.25	8.25	8.25	7.41	5.30
Hydrobromide, 5 oz tins, 10 oz lots	oz.	.....	8.35	8.35	8.35	7.52	5.50
Hydrochloride, 5 oz tins, 10 oz lots	oz.	.....	8.35	8.35	8.35	7.52	5.30
Ethyl Hydrochloride, 5 oz tins, 10 oz lots	oz.	.....	9.85	9.85	9.85	9.00	6.45
Sulfate, 5 oz tins, 10 oz lots	oz.	.....	8.35	8.35	8.35	7.35	4.95
Naphthalene Flake, 175 lb bbls wks	lb.	.04½	.05	.05	.04½	.04½	.02½
Balls, 250 lb bbls wks	lb.	.05½	.06	.06	.05½	.05½	.02½
Oil Mineral White, 50 gal bbls 80-85 vis	gal.	.60	.65	.65	.60	.67	.....
85-90 vis	gal.	.65	.70	.70	.65	.65	.....
125-130 vis	gal.	.70	.80	.80	.70	.71	.....
290 vis	gal.	1.00	1.10	1.10	1.00	.99	.....
Oil Mineral							
Russian 110-115 vis	gal.	.70	.75	.75	.70	.72	.....
150-155 vis	gal.	.73	.80	.80	.67	.76	1918
325-335 vis	gal.	.90	.95	.95	.80	.86	.30

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Chemicals

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

somewhat stronger with quotations ranging from $1.80 @ $2.50 lb.

Haarlem Oil — Prices are firm in the face of a steady demand. Sellers are making every effort to prevent any surplus of unsold stocks. Domestic is quoted at $3.25 and imported at $3.50.

Iodine — Stable prices on crude have kept resublimed in a steady position in the face of routine but fairly satisfactory and normal demand. The former is quoted at $4.20 @ $4.25 lb. and the latter at $4.65 @ $4.70 lb.

Menthol — The market is recovering somewhat from the sharp decline in prices which have taken place during the past month. Prices are now firm at $4.10 @ $4.35 lb. with some sellers refusing to go below $4.25 in an effort to put this market more in line with the Japanese market. Replacements there are still made at the equivalent of $4.25 lb. in this country, and the situation in Japan is in direct contrast with conditions here. Present stocks in Japan amount to 5,800 cases, excluding shipments to be made in March. Keen competition has placed this market in a weak position although statistically it should be strong. The ultimate result is of course uncertain but it is likely to have the effect of curtailing planting of peppermint in Japan, with resulting high prices of menthol the following year. Most factors believe that the price will go no lower, due to the fact that stocks available here are in firm hands who will hold them for a price equal at least to replacement costs. But whether the market will remain at present level or go higher is still a matter for conjecture.

Mercury — The metal has declined further during the past month, now being quoted at $120.00 @ $121.00. The market is barely steady, with but nominal sales. There is a feeling in some quarters that the market may react due to the seasonal closing of the Spanish furnaces, but the prevailing tendency is still downward. Approximate estimates show that production in both Spain and Italy during 1927 increased to a much greater extent than had been anticipated. The whole of the Spanish output for 1927 is placed at 71,000 flasks, against about 47,000 flasks in 1926, and only 35,000 flasks for 1925. Total Italian production, which for 1926 amounted to 52,000 flasks, increased in 1927 to approximately 65,500 flasks. Taking the two leading producing countries together, there was an excess output of approximately 37,500 flasks as compared with the previous year. In addition, production in the United States during 1927 increased about 2,400 flasks to 12,408 flasks. This gives a total increase in production for these three countries of

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Oxgall, Purified, 5 lb bot	lb.	1.75	2.50	2.50	1.75	2.00	1918
USP, 5 lb bot	lb.	2.00	2.50	2.50	2.00	1.75	1.44
Oxyquinoline Sulfate, tins	lb.	8.50	9.25	9.25	8.50	8.50	.....
Pancreatin, USP, 5 lb bot	lb	.....	2.50	2.50	2.50	2.44	2.97
Paraffin, refd, 200 lb cs slabs 118-120 deg M P.	lb.	.08	.09	.09	.08	.08	.....
128-132 deg M P	lb.	.07½	.07¾	.07¾	.07½	.07½	.....
Para-Aldehyde, USP, 100 gal drums	lb.	.67	.77	.77	.67	.67	.38
Paraformaldehyde, USP, 100 lb cases	lb.	.45	.47½	.47½	.45	.50	.40
Pepsin, USP, 5 lb bottles, 1:3000	lb.	.....	2.50	2.50	2.50	2.45	2.50
1:6000	lb.	.....	5.00	5.00	5.00	4.90	5.00
1:10000	l'q	.....	..835	8.35	8.35	8.18	8.25
Peptone, powd, 5 lb bot	lb					1 71	1.42
Petrolatum							
Petrolatum, Lily White, USP, 400 lb bbls	lb.	.09	.10	.10	.09	.09	.07
Snow White, USP, 400b bbls	lb	.12½	.13¼	.13¼	.12½	.12½	.10
Phenolphthalein, USP, 100 lb drums	lb.	1.10	1.20	1.20	1.10	1.27	1918
5 lb cans 100 lb lots	lb.	1.23	1.30	1.30	1.23	1.37	1.15
Phenylethylmalonylurea, 1 oz pkg	oz.	.....	5.50	5.50	5.50	5.50	.....
Pilocarpine Hydrochloride, USP, 1 oz vials 25 oz. lots	oz.	.....	3.25	3.25	3.25	3.25	2.45
Nitrate, 25 oz lots	oz.	.....	3.25	3.25	3.25	3.25	2.45
Single ounce	oz.	.....	4.50	4.50	4.50	4.50	2.55
Alkaloid, 15 gr vials	vl.	.....	.75	.75	.75	.75	.50
Piperazine Hydrate, 1 lb bot	lb	.....	15.00	15.00	15.00	15.00	.....
Piperadine, 25 oz bottles	lb	.....	8.00	8.00	8.00	8.00	.....
Popodhyllin 5 lb bottles	lb.	....	4.50	4.50	4.50	4.50	2.82
Second hands	lb	3.90	4.00	4.00	3.90	3.96	.....
Potassium Salts							
Potassium Acetate, USP, 100 lb kegs	lb.	.29	.30	.30	.29	.29	.16
Bicarb, USP, crys 320 lb bbls	lb.	.08½	.09	.09	.08½	.13	.06¾
Bromide, USP, crys 100 lb cs	lb	.42	.43	.43	.42	.45½	.39
Citrate, USP, 50 lb bbl	lb.	.51	.53	.55	.51	.51	.47
Guaiacol Sulfonate	lb.	1.95	2.25	2.25	1.95	1.81	1.85½
Hypophosphite, 10 lb cans	lb.	.80	.85	.85	.80	.80	.61
Iodide, USP, 100 lb cases	lb.	3.35	3.50	3.60	3.25	3.54	2.95
Lactophosphate, 4 oz bot	lb.	.....	.90	.90	.90	.90	1.25
Permangan, USP, crys, 100 lb drs wks	lb.	.15	.16½	.16½	.15	.15	.09¾
Phosphate dibasic pure, kegs	lb.	.....	.49	.49	.49	.54	.25
Salicylate, 25 lb cans	lb.	.....	1.18	1.18	1.18	.94	.50¾
Sulfate, USP, VIII, 100 lb kegs	lb.	.13	.15	.15	.13	.15	.05
Sulfocyanide, CP 15 lb jars	lb.	.....	.50	.50	.50	.50	.44
Tartrate, CP, tins	lb	.....	.65	.65	.65	.65	.36
Pyrogallol, USP, see Acid Pyrogallic							
Quinidine Alk, 100 oz tins	oz.	.70	.75	.75	.70	.70	.35
Sulfate, 100 oz tins	oz.	.....	.50	.50	.50	.50	.23
Quinodine, see Chinodin							
Quinine Salts							
Quinine Sulfate, USP, American 100 oz tins	oz.	.....	.40	.40	.40	.50	.26
1 oz tins, 100 oz lots	oz.	.....	.47	.47	.47	.57	.26
Dutch, 100 oz tins	oz.	.....	.40	.40	.40	.50	.....
Java, 100 oz tins	oz.	.....	.40	.40	.40	.40	.25
Japanese 100 oz tins	oz.	.....	.40	.40	.40	.40	.....
Quinine Acetate	oz	.....	.78	.78	.78	.78	.54
Arsenate	oz.	.....	.78	.78	78	.78	.49
Benzoate	oz.	.....	.78	.78	.78	.78	.....
Bisulfate, USP	oz.	.....	.40	.40	.40	.40	.26
Resale	oz.	.37	.39	.39	.37	.37	.....
Citrate	oz.	.....	.51	.51	.51	.51	.46
Dicarbonate, 1 oz tins	oz.	.....	2.56	2.56	2.56	2.51	.....
Dihydrobromide	oz.	.....	.54	.54	.54	.54	.42
Dihydrochloride, USP	oz.	.....	.54	.54	.54	.54	.48
Ethyl Carbonate, 16 oz tins	oz.	.....	.58	.58	.58	.62	1.15
Ferrocyanide	oz.	.....	.78	.78	.78	.72	.48
Formate	oz.	.....	.73	.73	.73	.73	1.16
Glycerophosphate	oz.	.....	.80	.80	.80	.80	.93
Hydrobromide, USP	oz.	.....	.50	.50	.50	.50	.44
Hydrochlorosulfate	oz.	.....	.54	.54	.54	.54	.54
Hydrochloride & Urea, USP	oz.	.....	.74	.74	.74	.75	.49
Hypophosphite	oz.	.....	.70	.70	.70	.70	.49
Lactate	oz.	.....	.66	.66	.66	.66	.49
Phenolsulfonate	oz.	.....	.78	.78	.78	.78	.37
Phosphate	oz.	.....	.62	.62	.62	.62	.45
Salicylate, USP	oz.	.....	.52	.52	.52	.52	.43
Tannate, USP	oz.	.....	.41	.41	.41	.41	.31
Tartrate	oz.	.....	.78	.78	.78	.78	.44
Valerate	oz.	.....	.78	.78	.78	.78	.49
& Urea Hydrochloride, USP	oz.	.....	.88	.88	.88	.88	.57
Rennet, N. F. 5 lb 1:25,000	lb.	2.95	3.50	3.50	2.95	2.95	.....
Resorcinol							
Resorcinol, USP, 25 lb cans	lb.	1.70	1.75	2.00	1.70	1.85	.80
Rochelle Salt, USP, 225 lb bbl	lb.	.23	.23½	.23½	.23	.22	.17½
Imp, USP, 300 lb bbls	lb.	.....	.23	.23	.23	.21	.18
Rock Sugar, 5 lb boxes	lb.	.....	.15	.15	.15	....	.....
Saccharin, USP, 10 lb cans	lb.	1.70	1.80	1.80	1.70	1.70	2.25
USP, Soluble, 10 lb cans	lb.	1.75	1.85	1.85	1.75	1.75	2.25
Salicin, USP	lb	.....	4.86	4.86	4.86	4.42	3.90
Salol, USP, 100 lb drums	lb.	.....	.90	.90	.90	.90	.53
Saltpetre, powd, bbls wks	lb.	.06½	.08¼	.08¼	.06½	.06½	.05½
Santonin, USP, bulk	lb.	141.00	145.00	141.00	145.00	141.00	28.70
Saponin, refined	lb.	1.30	1.50	1.50	1.30	1.26½	1.25
Scopolamine, see Hyoscine	lb.						

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REPRESENTATIVES

CHICAGO DETROIT CINCINNATI MONTREAL
NEW ORLEANS SAN FRANCISCO BALTIMORE

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

40,000 flasks during 1927 as compared with 1926 production. These figures may offer some explanation as to the prevailing downward price tend which has been evident in this market.

Quoted prices on mercurials continue unchanged despite decreased cost of production due to reduction in metal prices. It is said, however, that although there has been no change in quoted prices, considerable shading is being done in the face of competition.

Methyl Salicylate — Although there has been no change in prices quoted by producers, considerable quantities have been sold at 39c @ 40c lb. in cans. The market keeps firm despite this shading due to the fact that there is a well-defined limit to quantities available at that price.

Oil Mineral — Prices on the heavier grades of Russian oil have advanced considerably during the past month. The only grade unchanged in price is 110-115 vis. which is still quoted at 70c @ 75c gal.; 150-155 vis. is now at 73c @ 80c gal. and 325-335 vis at 90c @ 95c gal. The advance is attributed to a real shortage existing in the primary market due to an unprecedented demand over there. Added to this is the fact that transportation is difficult due to frozen waterways in and about Russia. Most importers are refusing to fill spot orders, and taking only contract orders for the heavy grades of oil. Others, more fortunate have sufficient stocks on hand and are filling orders as usual. Activity continues in spite of high prices. Conditions are not expected to ease off before the middle of April.

Potassium Citrate — Continued slack activity has lead to slightly lower prices. Now being quoted at 51c @ 53c lb.

Potassium Iodide — Increasing firmness is noted here with consequent increase in price to $3.35 @ $3.50.

Witch Hazel — Quotations remain steady at 80c @ $1.00 gal. although there is shading being done on quality basis.

Essential Oils

Oil Almond — Market remains in a comotose condition with supplies plentiful and prices on the easy side. Sweet oil is particularly easy and some high priced sellers are now in line with the general price of 75c per pound.

Oil Bay — This market is quiet with supplies plentiful and dealers quoting unchanged prices. Practically all sellers are now offering goods at $1.90 per pound with no indications of any change occurring over the coming month or more.

Oil Bergamot — Irregular movements in prices continued throughout the month.

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Siedlitz Mixture, 250 lb bb	lb.	.....	.....	.....	.17½	.14
Silver						
Silver Metal, American	oz.	.....	.57½	.57½	.57½	.64	.....
Iodide, 16 oz lots	oz.	.....	.69	.69	.69	.69	.83
Nitrate, 10 oz bottles	oz.	.40½	.42½	.42½	.40½	.41	.35
Nucleinate, 1 oz bottles	oz.	.....	.46	.46	.46	.46	1.10
Bulk	oz.	.....	.37	.37	.37	.37	1.00
Proteinate, 1 oz bottles	oz.	.....	.41	.41	.41	.41	.70
Bulk	oz.	.....	.32	.32	.32	.32	.65
Soap, Castile, 50 lb boxes	lb.	.....	.25	.25	.25	.25	.11½
USP, pwd., 250 lb bbls	lb.	.28	.30	.30	.28	.28	.....
USP, green, 450 lb bbls	lb.	.07½	.07½	.07½	.07½	.07½	.08
Sodium Salts						
Sodium Benzoate, USP, 100 lb bbls	lb.	.50	.55	.55	.50	.50	.23½
Bromide, USP, 100 lb kegs	lb.	.42	.43	.43	.42	.44	.45
Cacodylate, USP, 25 lb bot	lb.	4.80	6.10	6.10	4.80	4.80	3.75
Citrate, USP, X 50 lb kegs	lb.	.45	.47	.47	.45	.45	.48½
USP VIII, 50 lb kegs	lb.	.38	.40	.40	.38	.38	1918
Glycerophosphate, USP, crys 25 lb cans	lb.	1.40	1.55	1.55	1.40	1.40	1.90
Powder, 25 lb tins	lb.	1.45	1.60	1.60	1.45	1.45	.....
Soln, USP, 25 lb tins	lb.	1.05	1.20	1.20	1.05	1.05	1.10
Hypophosphite, USP, 25 lb cans	lb.	.70	.75	.75	.70	.70	.59
Iodide, USP, 25 lb jars	lb.	4.25	4.30	4.30	4.25	4.25	3.30
Phosphate (Mono-Sodium), 100 lb kegs	lb.	.30	.31	.31	.30	.30	.45
Di-Sodium USP, granular, 275 lb bbls	lb.	.07½	.08	.08	.07½	.07½	.04½
Pyrophosphate, 100 lb kegs	lb.	.....	.29	.29	.29	.26	.27
Salicylate, 100 lb kegs	lb.	.....	.47	.47	.47	.47	.27
Silicate, 41° drums	lb.	.....	.01½	.01½	.01½	.01½	.01
47° drums	drm.	.....	12.00	12.00	12.00	12.00	.....
Sulfocarbolate, USP, 100 lb kegs	lb.	.....	.31	.31	.31	.31½	.19
Sulfocyanate, CP crys, jars included	lb.	.....	.60	.60	.60	.60	1.25
Spartein Sulfate, USP, 25 oz bulk	oz.	.65	.70	.70	.60	.65	.33
Single oz vial	oz.	.77	.90	.90	.77	.77	.35
Starch Rice, 140 lb bags	lb.	.09	.10	.10	.09	.09	.07
Strontium Salts						
Strontium Bromide, USP, 50 lb kegs	lb.	.51	.52	.52	.51	.51	.45
Carb, 100 lb kegs wks	Lb	.....	.20	.20	.20	.22	1918
Iodide, USP, 25 lb jars	lb.	.....	4.00	4.00	4.00	4.00	3.00
Lactate, kegs	lb.	.90	1.10	1.10	.90	1.07	.90
Nitrate, 600 lb bbls NY	lb.	.08	.08½	.08½	.08	.08	.07½
Imp. bbls NY	lb.	.08	.08½	.08½	.08	.08	.07½
Salicylate, USP 100 lb keg	lb.	.....	1.10	1.10	1.10	.91	.38
Strophanthin, USP, 1 oz vial	oz.	.....	19.00	19.00	19.00	19.00	9.00
Crystals	lb.	.....	75.00	75.00	75.00	75.00	16.50
Strychnine						
Strychnine Alk, USP crys, 100 oz tins	oz	.56	.66	.66	.56	.56	.46
Powdered	oz.	.46	.56	.56	.46	.40½	1917
Japanese cans	oz.	.....	Nom.	.75	.75	.75	.....
Acetate	oz.	.....	.55	.55	.55	.55	.80
Arsenate, 25 oz cans	oz.	.....	.55	.55	.55	.55	.75
Glycerophosphite, USP	oz.	.....	.55	.55	.55	.55	1.45
Hydrobromide	oz.	.....	.55	.55	.55	.55	.80
Hydrochloride	oz.	.....	.55	.55	.55	.55	.80
Hypophosphite	oz	.....	.65	.65	.65	.65	1.05
Nitrate, USP	oz.	.55	.62	.62	.52	.52	1918
Phosphate	oz.	.....	.55	.55	.55	.55	1918
Saccharine	oz.	.....	1.15	1.15	1.15	1.15	.....
Sulfate, USP crys, powd	oz.	.....	.38	.38	.38	.38	.46
Sugar						
Sugar, refined, 275 lb bbl	100 lb.	5.80	5.90	5.90	5.80	.....	.....
Milk, USP, 200 lb bbls	lb.	.18	.20	.20	.18	.18	.12
Sulfonal, see Sulfonmethane							
Sulfonethylmethane, USP, 10 lb boxes	lb.	3.85	4.05	4.05	3.85	3.85	3.50
Sulonmethane, USP, 10 lb box	lb.	2.65	3.85	3.85	2.65	2.65	2.20
Sulfur flwrs, 100%, 25 lb box	lb	.....	.10	.10	.10	.10	.....
Washed, USP, 125 lb bbl	lb.	.....	.06	.06	.06	.06	.04½
Iodide, USP, VIII, 5 lb bot	lb.	.....	4.55	4.55	4.55	4.55	3.60
Tapioca Flour, hgh grd bgs	lb.	.05	.05½	.05¼	.05	.05	.01
Tartar Emetic, USP, 300 lb bbls	lb.	.34	.36	.36	.34	.34½	.22½
Terebene, tins	lb.	.....	.85	.85	.85	.85	.50½
Terpin Hydrate, USP, 100 lb kegs	lb.	.40	.42	.47	.40	.45	.24
Terpineol, CP, 1000 lb drs	lb.	.33	.35	.35	.33	.36	Nom.
50 lb cans	lb.	.37	.38	.38	.37	.40	Nom.
Imported, 25 lb cans	lb.	.34	.37	.37	.34	.40	.....
Terpinyl Acetate, 25 lb can	lb.	1.65	1.85	1.85	1.65	1.65	.....
Theobromine						
Theobromine Alk, 5 lb cans	lb.	1.90	2.25	2.25	1.90	1.95	4.32
Sod. Salicylate, 1 lb bot	lb.	.....	2.10	2.10	2.10	2.40	2.64
Sod. Benzoate, 1 oz vials	oz.	.....	1.00	1.00	1.00	1.00	.....
Thymol, USP, 25 lb tins	lb	.....	2.75	2.75	2.75	2.92	2.20
Iodide kegs	lb.	6.50	7.00	7.00	6.50	6.44	5.70
Tin	lb.	.....	.53½	.53½	.53½	.....	.....
Veratrine Alkaloid	oz	.....	2.25	2.25	2.25	2.25	1.45
Sulfate, 1 oz vials	oz.	.....	2.25	2.25	2.25	2.25	1.55
Witch Hazel Ext., 50 gal bbl	gal.	.80	1.00	1.00	.80	1.05	1918
Yohimbin Hydrochloride, 1 oz vials	oz.	2.75	3.25	3.25	2.75	3.25	.....
Resale	oz.	2.65	2.70	2.70	2.65	2.65	.....
Zinc Carb, USP, 100 lb keg	lb.	.28	.31	.31	.28	.28	.13½
Chloride, USP, 25 jars ex	lb	.24	.29	.29	.24	.24	.17
Iodide, 5 lb bottles	lb.	.....	5.22	5.22	5.22	5.22	3.45
Oxide, USP, 100 lb bbls	lb.	.17	.18	.18	.17	.14½	.14½
Stearate, USP, 50 lb bbl	lb.	.....	.22	.22	.22	.21½	.30
Sulfate, USP, 100 lb bbl	lb.	.08	.09	.09	.08	.08	.06½
Sulfocarbolate, 100 lb kegs	lb	.....	.29	.29	.29	.29½	.19

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Aromatic Chemicals

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

In sympathy with the other citrus oils, bergamot moved up sharply. It appeared to overshoot the mark, however and had a sharp reaction. In one day when cables indicated a drop of 1c in lemon and 3c in orange, bergamot declined 20c per pound. The latest prices for spot goods range from $5.25 to $5.75 per pound as to quantity and quality and import price.

Oil Bois de Rose — There has been no change in the position of the sellers of either the Cayanne or the Brazilian and there are no indications that there will be any change.

Oil Camphor — The strength in the camphor has no effect thus far on the prices of camphor oil, The oil is a by-product of camphor production and is evidently in sufficient supply to satisfy demand.

Oil Cananga — Conditions have shown no change throughout the month. Competition between the Java producers continues sharp and it is not likely that the market will show any improvement unless these producers come to some agreement as to price.

Oil Cardamon — This oil continues to gain in potential strength due to the steadily rising market for the seeds. However, oil is still obtainable over a wide spread of prices.

Oil Cassia — Technical oil is nominal due to the detention of supplies by the Government officials as explained last month. This oil was diluted by the shipper in China with alcohol and consequently has been detained as an alcoholic mixture subject to 20 per cent. duty rather than free. It is not known just what disposition will be made of these goods. Meanwhile the U. S. P. material on spot has had to satisfy a great part of this demand and offerings of U. S. P. are now quoted at $2.00 @ $2.10 per pound.

Oil Cedar Leaf — Strength has developed in this market due firmer conditions existing at the sources of supplies. Dealers have advanced quotations and are now asking 95c @ $1.05 per pound.

Oil Citronella — While many factors are constantly awaiting a real upward movement in this oil, thus far it has not occurred nor is there any indication that it will take place. Buying is heavy, however, and the statistical position of the oil is excellent for real buying. There can be no doubt that any real movement will be up and not down.

Oil Cloves — Values are sound. The spice is very steady in price here and foreign markets are higher due to extensive crop damage at Zanzibar from heavy rains. Consequently the spot market for cloves is well below replacement costs,

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Natural Derivatives						
Anethol, 2 lb bot	lb.	.....	1.30	1.30	1.30	.....
Borneol, 1 lb bot	lb.	2.50	2.60	2.60	2.50	2.50	1.50
Carvol, 5 lb bot	lb.	.....	3.85	3.85	3.85	6.00	.....
Citral, 25 lb cans	lb.	.....	2.75	2.75	2.75	2.75	3.50
Citronellal, 1 lb bot	lb	3.00	3.25	3.25	3.00	3.00	2.50
Eucalyptol, USP, 50 lb cans	lb.	1.00	1.05	1.05	1.00	.90	.55
Eugenol, USP, 25 lb cans	lb.	2.75	2.90	2.90	2.75	2.75	2.00
Geraniol, domestic, 50 lb cases	lb.	2.50	2.70	2.70	2.50	2.65	4.25
Imported, 5 lb bot	lb.	2.90	3.10	3.10	2.90	3.03	4.25
Iso-Eugenol, 1 lb bot	lb.	4.25	4.50	4.50	4.25	4.25	3.25
Imported, 1 lb bot	lb.	3.70	3.80	3.80	3.70	3.82	3.25
Linalol from Bois de Rose, 5 lb bot	lb.	3.00	3.15	3.15	3.00	3.34	5.25
Menthol, 60 lb cases	lb.	4.25	4.50	4.50	4.25	4.05	3.60
less cases, 5 lb cans	lb.	....	4.85	4.85	4.85	4.95	4.50
Rhodinol, 1 lb bot	lb.	6.00	6.25	6.25	6.00	9.50	....
Saffrol, drums	lb.	.....	.27	.27	.27	.28½	.30
60 lb cans	lb.	.....	.29	.29	.29	.30½	.31
Thymol, USP, 25 lb tins	lb.	.....	2.75	2.75	2.75	3.50	2.05
Synthetic Aromatics						
Acetophenene, CP, 1 lb bot	lb	3.50	3.75	3.75	3.50	3.50	.....
Aldehyde, C 8 (Otcyl), 1 lb bot	lb.	.....	55.00	55.00	55.00	.....	.....
C 7, 1 lb bot	lb.	4.50	5.50	5.50	4.50	4.50	.....
C 9 (Nonyl), 1 lb bot	lb.	.....	140.00	140.00	140.00	87.50	.....
C 10 (Decyl), 1 lb bot	lb.	.....	48.00	48.00	48.00	49.50	.....
C 14, 1 lb bot	lb.	22.50	25.00	25.00	22.50	22.50	.....
C 16, 1 lb bot	lb.	70.00	80.00	80.00	70.00	70.00	.....
Aubepine, see Anisic Aldehyde							
Amyl Acetate							
Amyl Acetate, pure, 5 gal cans	gal.	4.75	5.50	5.50	4.75	4.75	5.00
Butyrate, 1 lb bot	lb.	.....	1.90	1.90	1.90	1.96	7.00
Butyrate, 5 lb bot	lb.	.....	1.75	1.75	1.75	1.75	.....
Cinnamate, 5 lb bot	lb.	9.50	9.75	9.75	9.50	5.00	.....
Formate, 1 lb bot	lb.	.....	1.90	1.90	1.90	2.00	.....
Formate, 5 lb bot	lb.	.....	1.75	1.75	1.75	1.75	.....
Phenyl Acetate, 1 lb bot	lb.	4.50	5.00	5.00	4.50	4.50	.....
Salicylate, 100 lb cbys	lb.	1.25	1.30	1.30	1.25	1.25	1.50
Imported	lb.	2.25	2.50	2.50	2.25	2.25	.....
Anisic Aldehyde, 1 lb bot	lb.	3.00	3.25	3.25	3.00	3.00	2.50
Benzaldehyde, USP, 40 lb cbys,	lb.	.....	.....	.....	.....	1.25	1918
50 lb cbys	lb.	1.25	1.35	1.35	1.25	1.25	1918
FFC, 40 lb cbys	lb.	1.35	1.45	1.45	1.35	1.86	1918
Benzoic Ether, see Ethyl Benzoate							
Benzophenone, 1 lb bot	lb.	4.50	5.00	5.00	4.50	4.50	.....
Benzyl Acetate							
Benzyl Acetate, 100 lb cbys	lb.	.90	1.10	1.10	.90	.97	.70
Alcohol, 5 lb bot	lb.	1.25	1.35	1.35	1.25	1.25	1.25
Benzoate, 5 lb bot	lb.	1.25	1.35	1.35	1.25	1.25	.75
Benzyl Benzoate		1.35	1.40	1.40	1.35	1.45	.....
Medicinal, FFC	lb.	.....	1.40	1.40	1.40	4.00	.....
Buytrate, CP, 1 lb bot	lb.	9.25	9.50	9.50	9.25	9.50	.....
Cinnamate, 1 lb bot	lb.	3.00	3.25	3.25	3.00	3.00	.....
Formate, 1 lb bot	lb.	3.15	3.25	3.25	3.15	3.95	.....
Propionate, 1 lb bot	lb.	3.60	3.75	3.75	3.60	5.50	.....
Succinate, 1 lb bot	lb.	5.25	5.50	5.50	5.25	7.50	.....
Valerate, 5 lb bot	lb.	3.00	3.25	3.25	3.00	3.25	1.75
Bornyl Acetate, 1 lb bot	lb.	3.15	3.25	3.25	3.15	5.00	.....
Bromstyrol, 25 lb cases	lb.	.....	5.00	5.00	5.00	16.00	.....
Butyl Anthranilate dom, 1 lb bot	lb.					16.00	.....
Butyric Ether, see Ethyl Butyrate							
Cinnamic Acid							
Cinnamic Acid, 5 lb cans	lb.	3.25	3.50	3.50	3.25	3.25	.....
Alcohol liquid, 1 lb bot	lb.	3.25	3.50	3.50	3.25	3.55	5.00
Crystallizable	lb.	7.00	8.00	8.00	7.00	7.00	8.00
Aldehyde	lb.	2.25	2.50	2.50	2.25	2.71	1.60
Imported, 1 lb bot	lb.	7.75	9.00	9.00	7.75	7.75	.....
Citronelyl Acetate, 1 lb bot	lb.	7.75	8.00	8.00	7.75	11.25	.....
Coumarin, 25 lb cans	lb.	3.50	4.00	4.00	3.50	3.60	3.25
Decyl Alcohol	lb.	25.00	28.00	28.00	25.00	28.00	.....
Diethyl Phthlate see Chemicals							
Diphenyloxide, 25 lb tins	lb.	1.00	1.15	1.15	1.00	1.15	.....
Diphenyl Methane	lb	1.50	1.75	1.75	1.50	1.75	..
Duodecyl Alcohol	lb.	20.00	22.00	22.00	20.00	22.00	.....
Ethyl Acetate							
Ethyl Acetate, pure, 5 lb bot	lb.	.45	.50	.50	.45	.45	3.75
Benzoate, 5 lb bot	lb	1.50	1.75	1.75	1.50	1.75	3.00
Ethyl Butyrate, 5 lb bot	lb.	1.80	2.00	2.00	1.80	2.00	10.50
Caproate, 1 lb bot	lb.	3.25	3.50	3.50	3.25	3.25	.....
Cinnamate, 1 lb bot	lb.	4.00	4.50	4.50	4.00	4.00	.....
Formate, 5 lb bot	lb.	1.00	1.25	1.25	1.00	1.00	12.00
Methyl Paracresol, 1 lb bot	lb.	3.25	3.50	3.50	3.25	3.25	.....
Phenyl Acetate, 5 lb bot	lb.	3.75	4.00	4.00	3.75	3.75	.....
Valerate, 5 lb bot	lb.	.....	3.75	3.75	3.75	3.75	.....
Salicylate, 5 lb bot	lb.	2.00	2.10	2.10	2.00	2.00	3.50
Formic Ether see Ethyl Formate							

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The physical properties lie between the scientifically well-known inactive (racemic) Menthol from Thymol or Piperitone and the Natural L Menthol (melting point 43-44°).

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Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

and this will eventually be reflected in the price of the oil.

Oil Coriander — Higher prices continue to be quoted as spot offerings are replaced by more recent arrivals. Quotations now stand at $11.50 @ $12.00 per pound. Present spot prices are still below import prices and doubtless import prices are far below the value of oil made from seeds bought at to-day's seed prices. The market has a long way to go before it reaches the top if the present conditions continue in the seed market. There will be no more seed available until the new crop in August.

Oil Cubebs — In slightly better supply on spot and therefore easier in price at $3.25 @ $3.35 per pound as to quantity and seller.

Oil Eucalyptus — Quiet but steady conditions continue to prevail in this market. Demand is excellent and supplies are plentiful to meet the demand. The heavy buying in Europe has not dislocated supplies for consumption in this country.

Oil Geranium — A mixed condition prevails in this oil with some dealers of bullish views and others bearish. News has come from primary markets that there is a short crop of Bourbon oil or that producers there are engaged in a concerted effort to boost prices. However, many dealers have been hearing rumors of advances in geranium for a long time and are skeptical of the present move. Prices of Bourbon oil are quoted all the way from $3.05 to $3.50 per pound for good oil depending upon the views of the seller. African oil is offered at $3.05 @ $3.35 per pound.

Oil Lavender — Despite reports of increased firmness, lavender oil remains available at $3.40 @ $3.65 per pound as to seller. The flowers are scarce but some dealers take that to mean that more flowers are available for oil production and can see no shortage of oil.

Oil Lemon — The anticipated break in the market did not arrive during the month and the market is in the same bullish position as it was. Good oil is even higher than it was last month and holders of spot stocks want a minimum of $2.55 per pound, with prices ranging up to $2.90 per pound as to seller and quantity for Italian oil. Shipment is being offered from abroad at prices that will not permit resale under present spot prices. Just how long the situation will remain firm in Italy is a puzzle to dealers here who have expected the break on many occasions in

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Geranyl Acetate						
Geranyl Acetate, 1 lb bot	lb.	3.20	3.25	3.25	3.20	4.04	6.00
Butyrate, 1 lb bot	lb.	13.00	13.50	13.50	13.00	13.00	.....
Formate, 1 lb bot	lb.	12.00	12.50	12.50	12.00	12.00	.....
Glyco Ester	lb.	.90	1.00	1.00	.90	1.00	.....
Heliotropin, 100-10 lbs	lb.	1.65	1.75	1.75	1.65	1.65	1.30
Imported	lb.	1.95	2.05	2.05	1.95	2.00	1.30
Hydroxycitronellal, 1 lb	lb.	5.50	7.50	7.50	5.50	7.30	.....
Indol, CP, 1 oz bot	lb.	4.25	4.50	4.50	4.25	3.75	.....
Ionone						
Ionone, 1 lb bot 100%	lb.	6.00	7.00	7.00	6.00	6.75	.....
Alpha	lb.	4.75	6.25	6.25	4.75	7.50	.....
Beta	lb.	5.50	7.25	7.25	5.50	8.00	.....
Methyl	lb.	5.75	7.25	7.25	5.75	7.25	.....
Iso Borneol	lb.	2.15	2.25	2.25	2.15	2.25	.....
Iso Bornyl Acetate	lb.	2.80	3.00	3.00	2.80	3.00	.....
Iso-Butyl Benzoate 5 lb bot	lb.	2.75	3.00	3.00	2.75	2.75	.....
Iso-Safrol, 1 lb bot imp	lb.	1.65	1.75	1.75	1.65	1.94	.....
Domestic 5 lb bot	lb.	3.50	3.75	3.75	2.50	3.50	.....
Lynalyl Acetate, 1 lb bot	lb.	3.25	4.50	4.50	3.25	7.75	.....
Benzoate, 1 lb bot	lb.	13.00	14.00	14.00	13.00	13.00	.....
Formate, 5 lb bot	lb.	10.50	12.00	12.00	10.50	15.00	.....
Methyl Acetophenone						
Methyl Acetophenone	lb.	3.65	3.75	3.75	3.65	3.70	.....
Anthranilate, 1 lb bot	lb.	2.40	2.45	2.45	2.40	2.51	4.50
Imported	lb.	2.70	2.75	2.75	2.70	2.76	4.50
Anthranilic Acid	lb.	11.75	12.00	12.00	11.75	12.00	.....
Benzoate, 5 lb bot imp	lb.	1.90	2.00	2.00	1.90	2.00	.....
Domestic, 5 lb bot	lb.	1.75	2.00	2.00	1.75	1.75	.....
Cinnamate, 1 lb bot	lb.	3.75	4.25	4.25	3.75	3.75	3.50
Heptenone, 1 lb bot	lb.	8.50	9.00	9.00	8.50	8.50	.....
Paracresol, 1 lb bot	lb.	4.50	8.00	8.00	4.50	5.67	.....
Phenylacetate, 5 lb bot	lb.	3.75	4.00	4.00	3.75	3.75	.....
Salicylate, USP, 500 lb dr	lb.	.....	.40	.40	.40	.43	.45
50 lb cases	lb.	.....	.42	.42	.42	.45	.47
Mirbane, rect 1,000 lb drs	lb.	.12	.13	.13	.12	.13	.06½
Musk Ambrette						
Musk Ambrette 1 lb cans	lb.	6.50	6.75	6.75	6.50	6.80	12.00
Ketone 1 lb cans	lb.	8.00	8.15	8.15	8.00	8.18	.....
Xylene 5 lb cans	lb.	2.25	2.35	2.35	2.25	2.39	.....
Nerolin 1 lb cans	lb.	1.40	1.50	1.50	1.40	1.48	2.00
Octyl Alcohol 1 lb bot	lb.	30.00	32.00	32.00	30.00	32.00	.....
Oenanthic Ether 1 lb bot	lb.	1.90	2.00	2.00	1.90	2.25	.....
Paracresol Methyl Ether	lb.	6.50	6.75	6.75	6.50	7.31	.....
Paracresyl Acetate	lb.	5.50	5.75	5.75	5.50	5.50	.....
Para Cymene Refd 110 gal dr	gal.	2.25	2.50	2.50	2.25	2.25	.....
Phenylacetaldehyde						
Phenylacetaldehyde 50% 1 lb bot	lb.	7.00	7.50	7.50	7.00	8.00	6.50
Imported 50%	lb.	6.25	6.50	6.50	6.25	7.00	6.50
100%	lb.	8.00	8.25	8.25	8.00	8.67	.....
Phenylacetic Acid 1 lb bot	lb.	3.00	3.25	3.25	3.00	3.00	.....
Phenyl Diacetate 1 oz bot	oz.	3.00	3.25	3.25	3.00	3.25	.....
1 lb bot	lb.	8.00	10.00	10.00	8.00	8.00	.....
Imported	lb.	7.00	7.75	7.75	7.00	7.00	.....
Phenylethyl Alcohol 1 lb bot	lb.	4.50	4.75	4.75	4.50	5.20	16.00
Phenyl Ethyl Acetate	lb.	8.25	8.75	8.75	8.25	10.00	.....
Butyrate 1 lb bot	lb.	15.00	16.00	16.00	15.00	16.00	.....
Formate, 1 lb bot	lb.	19.00	21.00	21.00	19.00	19.00	.....
Propionate, 1 lb bot	lb.	16.00	18.00	18.00	16.00	18.00	.....
Valerate, 1 lb bot	lb.	19.00	20.00	20.00	19.00	20.00	.....
Phenylpropylalcohol, 1 lb bot	lb.	15.00	16.00	16.00	15.00	15.00	.....
Skatol, 1 oz bot	lb.	4.50	7.00	7.00	4.50	4.50	.....
Terpinyl Acetate, 25 lb cans	lb.	.75	.80	.80	.75	1.05	1.25
Imported, 25 lb cans	lb.	.85	.90	.90	.85	1.25	1.25
Terpineol						
Terpineol, CP, 1000 lb drs	lb.	.33	.35	.35	.33	.35	.40
50 lb cans	lb.	.37	.39	.39	.37	.38	.45
Absolute, 25 lb cans	lb.	.48	.50	.50	.48	.49	.....
Imported, 25 lb cans	lb.	.58	.60	.60	.58	.39	.....
Vanillin, USP, 25 lb tins	lb.	.....	7.50	7.50	7.50	7.75	5.12
1 lb cans	lb.	.....	7.70	7.70	7.70	8.07½	5.50
Second Hands	lb.	.....	6.75	6.75	6.75	.45	.....
Valerianic Ether see Ethyl Valerate							
Yara Yara, 1 lb cans	lb.	1.50	1.60	1.60	1.50	1.50	.....

Essential Oils

Almond Bitter, USP, 5 lb bot	lb.	2.70	2.80	2.80	2.70	2.72½	3.50
Bitter, ffPA, 5 lb bot	lb.	3.00	3.25	3.25	3.00	3.00	3.35
Sweet, 56 lb cans	lb	.75	.77	.78	.75	.80	.80
Amber crude, 25 lb tins	lb.	.33	.35	.35	.33	.39	.12
Rectified, 25l b tins	lb.	.52	.55	.55	.52	.55	.32
Angelica Root, 1 lb bot	lb.	16.00	18.00	18.00	16.00	19.50	26.00
Anise Tech, 66 lb cases	lb.	.54	.56	.56	.54	.57	1.60
USP, 60 lb cans	lb.	.57	.59	.60	.57	.59	1.70
Apricot Kernel, 50 lb cans	lb.	.48	.50	.50	.48	.58	.30
Bay, 25 lb tins N. F. V., 50.55% Phenol	lb.	1.90	2.00	2.00	1.90	1.95	2.40
Terpeneless	lb.	5.80	6.00	6.00	5.80	6.00	6.50
Bergamot							
Bergamot, 25 lb coppers	lb.	5.25	5.75	5.85	4.85	5.91	5.10
Terpeneless	lb.	14.00	18.00	18.00	14.00	11.00	7.50
Artificial, 25 lb cans	lb.	2.50	3.25	3.25	2.50	2.50	3.10

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Essential Oils

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

the past. California oil is offered at $2.25 @ $2.60 per pound as to seller.

Oil Limes — Steady conditions continue in this market and it appears that prices have declined to a level commensurate with their value. Supplies are free but demand is good and prices are firm and unchanged.

Oil Mace — Market is steady and unchanged as to price due to the raw material pursuing a steady course in all producing centres.

Oil Nutmeg — In exactly the same position as oil mace and selling at the same price.

Oil Orange — In a similar position to lemon oil. The high market continues despite the firm convictions of all local factors last month that the break was due. Spot Italian oil is even above last month's quotations and is held at $3.25 @ $3.60 per pound as to seller and quantity. American cold pressed oil is still nominal at $3.60 per pound. West Indian oil is higher at $2.85 per pound. The Italian oil is well under control of producers in primary markets and there seems to be no indication how long it will stay up. The West Indian and California oils are in short supply and this working to the advantage of the Italian factors.

Oil Pennyroyal — This oil is losing in favor and consequently is in greater supply and less demand. Prices have eased off again and are now quoted at $1.75 per pound for domestic oil, and $1.40 per pound for imported material.

Oil Peppermint — Much to the surprise of dealers here this market refuses to show any real weakness. While minor advances and declines occur throughout each month, the end of the month finds the price back where it started. Some factors are of the opinion that the market will be maintained due to the fact that only about one-fourth of the crop is still in the hands of the growers. The banks are the ones who have been carrying the oil and they show no signs of weakening. Spot prices are $3.30 per pound for natural oil, and $3.60 @ $3.65 per pound for redistilled.

Oil Petit Grain — The market displays an easier tone locally probably due to freer spot supplies. South American oil is offering at $1.60 @ $1.65 per pound.

Oil Pimento — Although the spot market is easier with supplies offering as low as $2.65 per pound and ranging up to $3.25, the raw material situation points to a very strong market. Pimentos are in heavy demand in Europe and there is very little to be had locally. Factors in pimento look for a substantial advance.

Oil Pineneedle — Siberian oil continues to come through in greater quanti-

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Birch, Sweet, Northern, 25 lb. tins	lb.	.....	4.00	4.00	8.00	4.25
Southern, 25 lb. tins	lb.	.....	1.95	1.95	3.75	.....
Birch Tar, rect, 5 lb bot	lb.	.50	.55	.55	.50	.56	.55
Crude, 50 lb tins	lb.	.12	.13	.13	.12	.12	.10
Bois de Rose, tins							
Brazillian	lb.	1.80	1.90	2.00	1.80	.....	.....
Cayenne, tins	lb.	2.00	2.25	2.25	2.05	2.23	4.00
Cade, 25 lb cans	lb.	.25	.27	.27	.25	.26½	.16
Cajuput, native, 50 lb tins	lb.	.70	.75	.75	.70	.75	.57½
Calamus, 5 lb bot	lb.	3.40	3.50	3.50	3.40	3.77	2.50
Camphor Sassa, 1000 lb drs	lb.	.14½	.15½	.15½	.14½	.15	.15
White, 400 lb drs	lb.	.12	.12½	.12½	.12	.12	.12
Cans, 50 lbs	lb.	.14	.14½	.15	.14	.13	.13
Cananga							
Cananga, Native, 25 lb tins	lb.	3.00	3.50	3.50	3.00	4.75	2.80
Rectified, 25 lb tins	lb.	3.50	4.00	4.00	3.50	5.50	4.40
Caraway, USP	lb.	1.65	1.75	1.75	1.65	1.71	1.90
Cardamon, N F, 1 lb bot	lb.	25.00	38.00	38.00	25.00	26.59	28.00
Cascarilla, USP, 1 lb bot	lb	50.00	64.00	64.00	50.00	50.00	18.00
Cassia, 80-85%, 400 lb drs	lb.	.....	Nom.	1.45	1.30	1.67	1.10
Redist, USP, 50 lb cans	lb	2.00	2.10	2.10	1.70	1.96	1.30
Cedar Leaf, 50 lb tins	lb.	.95	1.05	1.05	.90	1.05	.60
Cedar Wood, light, 1000 lb drs	lb.	.24	.26	.26	.24	.32	.14
Celery, 1 lb bot	lb.	7.25	7.50	7.50	7.25	8.67	10.50
Chaulmoogra, 80 lb cases	lb.	.....	1.20	1.20	1.20	1.03½	.....
Cinnamon Ceylon, 1 lb bot	lb.	9.75	13.00	13.00	9.75	10.17	6.50
Leaf, 5 lb bot	lb.	1.60	1.75	1.75	1.60	1.60	.....
Citronella							
Citronella Ceylon 1000 lb drs	lb.	.34	.36	.36	.33	.34	.48
50 lb tins	lb.	.36	.39	.39	.35	.38	.49
Java, 400 lb drs	lb.	.41	.43	.43	.40	.45	1.30
50 lb tins	lb.	.43	.45	.46	.43	.48	1.35
Cloves, USP, 50 lb cans	lb.	1.35	1.40	1.40	1.25	1.45	1.00
6 lb bot	lb.	1.45	1.55	1.55	1.35	1.52	1.05
Copaiba	lb.	.70	.80	.80	.70	.87	1.00
Coriander, USP, 10 lb bots	lb.	11.50	12.00	12.00	10.50	6.39	5.50
Croton, USP, 25 lb tins	lb.	.90	.95	.95	.90	.90	.90
Cubebs, USP, 5 lb bot	lb.	3.25	3.45	3.45	3.25	4.12½	2.90
Cumin, 1 lb bot	lb.	.....	3.75	3.75	3.75	7.00	4.25
Dill, 25 lb cans	lb.	4.00	4.25	4.25	4.00	4.00	4.50
Erigeron, 20 lb tins	lb.	2.40	2.50	2.50	2.40	3.42	1.30
Eucalyptus							
Eucalyptus Austl, USP, 56 lb cans, cases	lb.	.59	.60	.60	.59	.57	.45
500 lb drs	lb.	.58	.59	.59	.58	.54½	.43
Fennel, USP, 25 lb tins	lb.	.80	.85	.85	.80	.80	1.90
Geranium African, 25 lb tins	lb.	3.05	3.25	3.25	3.00	2.93	4.75
Bourbon, 28 lb tins	lb.	3.05	3.50	3.50	3.00	2.92	3.65
Turkish, 28 lb tins	lb.	2.65	2.75	2.75	2.45	2.67	3.50
Ginger, 1 lb bot	lb.	4.80	5.00	5.00	4.80	5.50	4.25
Gingergrass, 28 lb tins	lb.	2.50	2.70	2.70	2.50	2.50	1.75
Hemlock, 25 lb tins	lb.	1.00	1.10	1.10	1.00	1.04½	.50
Juniper Berries, USP, 25 lb tins	lb.	2.40	3.75	3.75	2.40	2.59	.85
Wood, 50 lb tins	lb.	.50	.60	.60	.50	.50	.23
Lavender							
Lavender, USP, 28 lb tins	lb.	3.40	3.85	3.85	3.00	3.75	3.75
Spike Spanish, 50 lb cans	lb.	.95	1.05	1.05	.95	1.10	.90
Lemon Ital, 25 lb cans	lb.	2.55	2.90	2.90	2.30	2.33	2.10
California 35 lb cbys	lb.	2.25	2.60	2.60	1.85	.....	.....
Lemongrass, native, 50 lb cans	lb.	.90	.95	.95	.90	.92	1.05
Limes, expressed, 25 lb tins	lb.	9.25	9.50	9.50	9.25	9.37	3.25
Distilled, 25 lb tins	lb.	6.25	6.50	6.75	6.25	6.79	.75
Linaloe Mex, 70 lb cases	lb.	2.15	2.20	2.20	1.90	2.04½	3.75
Mace, distilled, 50 lb tins	lb.	1.65	1.85	1.85	1.60	1.77½	.70
Mandarin, 25 lb cases	lb.	7.50	8.00	8.00	7.50	8.60	10.00
Mirbane, ref Aromatic Chemicals							
Mustard							
Mustard, USP, 1 lb bots	lb.	9.50	10.00	10.00	9.50	10.00	3.50
Artif, USP, 5 lb bot	lb.	1.90	2.00	2.00	1.90	1.98	1.25
Neroli Bigarade, ¼ & ½ & 1 lb bot	lb	75.00	140.00	140.00	75.00	75.00	40.00
Petale, 1 lb bot	lb.	160.00	170.00	170.00	160.00	119.17	51.00
Artificial, 1 lb bot	lb.	5.00	15.00	15.00	5.00	7.50	.....
Nutmeg, USP, 50 lb tins	lb	1.65	1.70	1.70	1.60	1.70	.70
Orange							
Orange bitter, 25 lb tins	lb.	2.90	3.00	3.00	2.70	2.72½	4.35
Sweet W Ind., 25 lb tins	lb.	2.85	2.90	2.90	2.60	2.61	2.05
Italian, 25 lb cop	lb.	3.25	3.60	3.60	2.80	2.72	2.15
American, cold pressed 25 lb tins	lb.	3.50	Nom.	3.50	3.50	3.03	.....
Distilled, 25 lb tins	lb.	.....	2.70	2.70	2.20	2.15	.....
Spanish, 25 lb tins	lb.	3.00	3.15	3.20	3.00	2.94	.....
Oil Orris, concrete	lb.	2.50	3.25	3.25	2.50	3.25	.....
Origanum 50 lb cans tech	lb.	.28	.30	.30	.28	.28	.17
Parsley, 1 lb bot	lb.	6.50	6.75	6.75	6.50	6.50	8.00
Patchouli, 5 lb bot	lb.	8.50	13.00	13.00	8.50	9.04	4.00
Pennyroyal, dom, 25 lb tins	lb.	1.75	1.85	1.90	1.75	1.99	1.75
Imported, 25 lb tins	lb.	1.40	1.50	1.55	1.40	1.73	1.05
Peppermint, nat, 60 lb cases	lb.	3.25	3.40	3.40	3.20	3.44	3.80
Redis, USP, 60 lb cs	lb.	3.55	3.60	3.60	3.45	3.96	4.60
Petit Grain S A., 25 lb tins	lb.	1.60	1.70	1.70	1.60	1.64	3.25
French, 1 lb bot	lb.	6.25	6.50	6.50	6.25	6.50	4.75
Italian, 25 lb tins	lb.	2.20	2.30	2.30	2.20	2.20	3.85
Pimento, 25 lb tins	lb.	2.65	3.25	3.25	2.65	3.67½	1.70
Pineedle Siberian, cans	lb.	.70	.80	.85	.70	.97	.36
Pinus, Sylvestris, 25 lb tins	lb.	1.90	2.00	2.00	1.90	1.69	1.85
Pumilio, USP, 25 lb tins	lb.	2.85	2.95	2.95	2.85	2.78	2.50
Rose Fr, 8, 16, & 32 oz pkgs	lb.	12.00	15.00	15.00	12.00	9.00	12.50
Bulg, 8, 10 & 32 oz pkgs	lb.	10.25	13.00	13.00	10.25	10.25	19.00

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Essential Oils

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

ties and the market presents an easy tone with prices quoted at 70c @ 80c per pound.

Oil Sandalwood — The same steady conditions prevail in this market with oil moving into consumption in good volume and a firm unchanged price.

Oil Savin — Spot offerings are quoted slightly lower at $1.70 per pound. Greater spot supplies is responsible for the easier condition.

Oil Spearmint — Unchanged conditions prevail in this market although spot goods are quoted slightly below last month's figures at $4.20 @ $4.30 per pound. Demand of spearmint is well balanced with production and this together with the steadiness of the peppermint oil market keeps prices from fluctuating.

Oil Thyme — All grades are in good supply on spot and prices are steady and unchanged.

Oil Vetivert — The same easy condition prevails in this market with Bourbon oil still offering on spot at $5.85 per pound. The low prices that have prevailed both in this oil and geranium has caused the producers in Reunion to be poorly repaid compared with other years. However there are signs of strength developing in geranium and it is possible that at a later date the same methods might be applied to vetivert.

Oil Wormseed — Although prices are generally quoted at last month's advance to $3.25 @ $3.45 per pound, the market is not in as strong a position as it was at that time and recessions would not be surprising.

Oil Wormwood — The scarcity increases and prices continue to rise with holders now naming a minimum of $14.00 per pound. No recessions in price are in sight.

Oil Ylang Ylang — While some holders of Bourbon oil have advanced their quotations to $10.50 per pound, oil is still being offered as low as $9.00 per pound. It is quite probable that the higher prices are being named in sympathy with the firm attitude of the Bourbon sellers with reference to geranium oil. There seems to be no basic reason for an advance although it is possible that one may develop.

{ Crude Drugs }

Aconite Leaves — The market remains quiet. New crop leaves have arrived on spot but this has not weakened the tone of the market as was anticipated. The holders of the new crop material are hold-

	Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Rosemary, USP, 27½ lb tins....lb.	.47½	.52½	.52½	.47½	.47½	.65
1000 lb drums....lb.	.42½	.45	.45	.42½	.42½	.62½
Tech, 25½ lb tins....lb.	.....	.34	.34	.34	.37	.57
Rue, 1 lb bot....lb.	3.15	3.25	3.25	3.15	3.80	3.85
Sandalwood						
Sandalwood, E Ind, USP, 100 lb case....lb.	7.05	7.15	7.15	7.05	7.10	4.75
W Indian (Amayris), 25 lb tins....lb.	2.30	2.35	2.35	2.30	2.10	1.15
Sassafras, USP, 50 lb cans....lb.	.80	.85	.85	.75	.98	.55
Artificial, 1000 lb drs, 60 lb cans....lb.	.26	.28	.28	.26	.26	.24
Safrol, cans....lb.	.28	.29	.29	.28	.27½	.30
Savin, 50 lb tins....lb.	1.70	1.90	1.90	1.70	1.84	1.80
Spearmint						
Spearmint, USP, 50 lb tins....lb.	4.20	4.40	4.45	4.20	3.89	3.40
Spruce, 50 lb tins....lb.	1.00	1.10	1.10	1.00	1.07	.45
Tansy, American, 25 lb tins....lb.	4.25	4.50	4.50	4.25	4.85	4.25
Tar, 50 gal bbls....lb.	.25	.30	.30	.25	.25	.....
USP, 50 gal bbls....lb.	.75	1.50	1.50	.75	.75	.....
Thyme, red, NF, 25 lb tins....lb.	.80	.90	.90	.80	.85	1.15
White, NF, 25 lb tins....lb.	.85	.90	.90	.85	.97	1.25
Tech, 110 lb drums....lb.	.60	.70	.70	.60	.65	.....
Turpentine, USP, rect cbys....lb.	.27	.30	.30	.27	.30	.45
Vetivert Bourbon, 10 bot....lb.	5.85	6.00	6.00	5.85	9.90	2.00
Indian, 1 lb bot....lb.	25.00	38.00	38.00	25.00	28.33	12.00
Java, 1 lb bot....lb.	15.00	16.00	16.00	15.00	18.83	.....
Wine, heavy, 1 lb bot....lb	1.65	1.75	1.75	1.65	1.75	4.00
Wintergreen						
Gaultheria, true, 25 lb tin....lb.	8.00	10.00	10.00	8.00	8.00	4.25
Southern, 25 lb tins....lb.	3.75	4.00	4.00	3.75	3.75	.....
Synthetic see Methyl Salicylate....						
Wormwood, dom, 25 lb tins....lb.	.....	14.00	14.00	14.00	7.84	3.75
Wormseed, Balt, 25 lb tins....lb	3.25	3.45	3.45	2.85	3.36	1.40
Ylang Ylang Bourbon, 10 lb tins No 1....lb	9.00	10.50	10.50	9.00	12.00	.....
10 lb tins No. 2....lb	6.75	7.00	7.00	6.75	7.00	.....
Manila, 1 lb bot....lb.	30.00	40.00	32.0[illegible]	30.00	32.25	28.00

Oleoresins

Aspidum, USP, bot and tins....lb.	.....	2.10	2.10	2.10	2.11	1.90
Capsicum, USP, bot and tins....lb.	3.50	4.25	4.25	3.50	3.28	2.75
Cubeb, USP, bot and tins....lb	3.00	3.25	3.25	3.00	3.25	2.90
Ginger bot and tins....lb.	2.25	2.7[illegible]	2.75	2.25	2.25	4.25
Malefern see Aspidum....						
Orris, bot & tins....lb.	15.00	18.00	18.00	15.00	15.00	.....
Pepper, black, USP, bot & tin....lb.	.....	.....	.....	.....	4.50	.....
Vanilla, bot & tins....lb.	8.00	8.75	8.75	8.00	9.00	.....

Perfumer's Sundries

Almond Meal, 25 lb cans....lb.	.20	.21	.21	.20	.25	.22
Amber liquid, 400 lb drs....lb.	2.20	2.30	2.30	2.20	2.20	.....
Ambergris, Black, boxes....oz.	14.00	15.00	15.00	14.00	17.50	26.00
Gray boxes....oz.	32.00	36.00	36.00	32.00	32.00	28.00
Balsams						
Balsam Copaiba Para, 80 lb cases....lb	.47	.48	.49	.47	.43½	.44
South American, USP, 80 lb cases....lb	.51	.52	.52	.51	.55	.41
Peru, 120 lb cases....lb.	1.65	1.70	1.70	1.65	1.71½	1.50
Tolu, 90 lb cases....lb.	.95	1.00	1.20	.95	1.15½	.50
Benzoin Gum, Siam, boxes....lb.	1.20	1.30	1.30	1.20	1.12½	1.50
Castoreum, 1 lb bot....lb.	9.50	10.00	10.00	9.50	12.00	11.00
Chalk, Precip, 1 gt 175 bbls....lb	.04½	.05	.05	.04½	.04½	.....
Cherry Laurel Water, 24 ltr cby....lb	4.10	4.60	5.60	4.10	6.07	6.60
Civet, Abyssin, horns....oz	2.10	3.00	3.00	2.10	2.10	1.50
Labdanum, 5 lb bot....lb.	5.50	6.00	6.00	5.50	7.50	.....
Lanolin, hydrous, 350 lb bbls....lb.	.15	.16	.16	.15	.19	.....
Anhydrous, 350 lb bbls....lb.	.16	.17	.17	.16	.22	.....
Musk Pods Cabardine, tins....lb.	.....	.....	....	.....	.....	8.00
Musk						
Tonquin, tins....oz	24.00	26.00	26.00	24.00	24.00	13.00
Grains Cabardine, tins....oz	.....	.....	.....	.....	.....	12.00
Tonquin tins....oz.	28.00	34.00	34.00	28.00	36.00	16.00
Synthetic See Aromatic Chemical....						
Orris Rt Flor powd bbls....lb	.12	.13	.13	.12	.12	.19
Verona powd, bbls....lb	.10	.11	.11	.10	.10	.14
Petrolatum						
Petrolatum, snow white, 350 lb bbls....lb	.12½	.13½	.13½	.12½	.12½	.10
Light Amber, 350 lb bbls....lb	.12½	.13	.13	.12½	.04½	.03
Rice Starch ,140 lb bags....lb.	.09	.10	.10	.09	.09	.....
Rose Water, 24 ltr cbys....cby	5.00	5.50	5.50	5.00	8.55	5.02
Sandalwood, pwd bags,....lb.	.22½	.40	.40	.22½	.61½	.75
Saponin, 5 lb tins....lb.	1.15	1.30	1.30	1.15	1.15	.....
Talc, Italian, 220 lb bags....ton.	60.00	80.00	80.00	60.00	60.00	35.00
French, 220 lb bag....ton	40.00	45.00	45.00	40.00	40.00	15.00

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Drugs and Spices

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

ing it at high prices and consequently the older material is holding firm.

Agar Agar — The market remains dull with prices showing virtually no change from last month. Inquiry is of good volume but thoroughly routine. No forecasts are made of the future trend as little is known of the conditions in line with practically all products coming out of Japan.

Aloes — There has been no change in either the spot or basic primary conditions. Holders are moving goods into consumption at a normal rate with Cape selling at 9¾c @ 10c per pound.

Angelica Root — The advance of last month has been sustained due to the fact that it was based on higher costs in primary markets. While the collections have been of normal size, the gatherers have been able to secure higher prices. This increase in price accelerated demand for a time but this was short lived as demand is now no more than normal.

Anise — Conditions in China remain easy and consequently the lack of difficulty in getting supplies out of that country keep prices from showing any change upward. The Spanish shippers, however, have been asking more money and spot supplies of Spanish seed are now quoted at 15c @ 15½c per pound. It does not seem that the Spanish can advance very far with easy conditions in the other varieties.

Arnica Flowers — While this market has been strong during the month prices have shown no further advance. While stocks are small on spot quotations from abroad are made at much lower figures and a general reduction in the market price of about 20c per pound is likely any day. The lower prices are expected to increase demand which has been light due solely to the high levels at which goods have been selling.

Asafoetida — Lower prices of 28c @ 30c per pound as to seller and quantity are quoted for the whole. This is due to generally easy conditions on spot and a very easy shipment market. Powdered goods are sharply lower at 50c @ 54c per pound as to seller and quantity. This is not due to lower primary markets or to large stocks on hand, but it is merely a matter of bitter price cutting among sellers here. One seller lost an order and retaliated with a lower price, and then a price war was on. Fancy tears are still fetching the same price of 60c @ 70c per pound.

Bayberry Bark — There was no indications of weakness in this market due to the fact that the supplies in merchants hands were of no more than comfortable size considering the normal demand that

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Crude Drugs and Spices						
Aconite Leaves, bales	lb.	.11	.12	.12	.09	.09	.07
Root, USP, bags	lb.	.22	.25	.22	.27	.24	.11
Agar Agar, No. 1, 200 lb bale	lb.	1.00 to 1.05		1.00	.96	1.07	.45
No. 2, 200 lb bales	lb.	.78	.90	.90	.78	.89	.40
No. 3, 200 lb bales	lb.	.59	.....	.59	.59	.70	.37
Agaric White, cases	lb.	.60	.75	.75	.60	.60	.11
Granulated, boxes	lb.	.80	.95	.95	.80	.80	.....
Almonds Bitter, boxes,	lb.	.80	.....	.80	.80	.79	.....
Sweet boxes	lb	.65	.70	.70	.65	.65	.....
Meal barrels, boxes	lb.	.15	.30	.30	.15	.15	.07
Aletris Root, bags	lb	.40	.41	.41	.40	.42	.26
Alkanet Root, bags	lb	.10	.13	.12	.10	.10	.06
Aloes							
Aloes, Barbados, 120 lb bbl	lb.	1.00	1.10	1.10	1.00	1.00	1.15
Powdered	lb.	1.10	1.20	1.20	1.10	1.10	.....
Cape, 400 lb cases	lb.	.09½	.10	.10	.09½	.10	.08
Curacao, 100 lb cases	lb.	.12	.12½	.12½	.12	.11½	.10
Gourds	lb.	.35	.45	.45	.35	.35	.09½
Socotrine, Whole, 300 lb cs	lb.	.40	.....	.40	.40	.35	.22
Althea Root, bags	lb.	.20	.22	.22	.20	.20	.16
Cut cases	lb.	.36	.40	.40	.36	.42	.22
Grd & powd, bags	lb.	.30	.32	.32	.30	.33	.....
Ammoniac Gum Tears, cases	lb.	.50	.....	.50	.50	.20	.17½
Angelica Root, bags	lb	.20	.22	.22	.18	.21½	.15
Imported	lb	.14½	.....	.14½	.14½	.14½	.18
Angostura Bark, bags	lb.	.18	.....	.18	.18	.18	.14½
Anise Levant, bags	lb.	.12½	.13	.13	.12½	.12½	1916
Star case	lb.	.14	.15	.15	.14	.16½	.19½
Spanish, bags	lb.	.15	.15½	.15½	.13	.15	.10
Arabic Gum							
Arabic Gum, White, No. 1, 100 lb bags	lb.	.22	.27½	.27½	.22	.22	.25
Seconds, 200 lb bags	lb	.16	.21	.21	.16	.16	.19
Sorts, Amber, 220 lb bags	lb.	.10½	.10½	.10½	.10½	.10½	.10½
Powd. USP, 300 lb bbls	lb.	.19	.21	.21	.19	.19	...
Areca Nuts, 100 lb bbls	lb.	.12	.12½	.12½	.12	.13	.05
Powd, 100 lb bbls	lb.	.17	.21	.21	.17	.17	.....
Arnica Flowers, bales	lb.	1.48	1.50	1.50	1.48	....	.12
Root, bags	lb.	.....	.45	.45	.37	.37	.40
Arrowroot American powd bbls	lb	.10	.10½	.10½	.10	.10	.....
St. Vincent powd bbls	lb.	.10	.10½	.10½	.10	.10½	.08
Asafoetida 250 lb cases	lb.	.28	.30	.31	.28	.30½	.25
Powd 50 lb boxes	lb.	.50	.54	.68	.50	.60	.....
Tears Fancy	lb.	.60	.70	.70	.60	.61½	.19
Balm Gilead Buds bags	lb.	.38	...	.38	.38	.37	.24
Balmony Herbs bales	lb	.18	.....	.18	.18	.13	.06½
Barberry Bark bales	lb.	.12	.12½	.12½	.12	.10½	1918
Root bags	lb.	.29	.32	.32	.29	.24	.06½
Bayberry Bark bales	lb.	.....	.18	.18	.12	.09½	.05
Wax bbls	lb.	.29	.32	.32	.29	.29	.27
Belladonna							
Belladonna Leaves bales	lb	.19	.23	.23	.19	.20	.50
Root bags	lb.	.20	.21	.21	.20	.20	.10
Bees Wax White cases	lb.	.55	.56	.58	.55	.58	.47½
Yellow refined cases	lb.	.41	.42	.42	.41	.44	.40
Benzoin Gum Siam boxes	lb	Nom.	.....	.....	.....	1.25	1.50
Powdered	lb.	1.50	.....	1.50	1.50	1.47	.....
Sumatra 80 lb boxes	lb.	.65	.68	.68	.65	.59	.34
Berberis Aquafolium Root bags	lb.	.13	.....	.13	.13	.11½	.11
Beth Root bags	lb.	.18	.....	.18	.18	.18	.08½
Bitter Root 100 lb bags	lb.	.19	.20	.20	.19	.21	.24
Blackhaw Bark of Root bales	lb.	.30	.32	.30	.30	.27	.17
Bark of Tree bales	lb.	.18	.18½	.18½	.18	.15½	.04½
Black Indian Hemp Root 100 lb bags	lb.	.20	.....	.20	.20	.20	.20
Blood Root bags	lb.	.24	.25	.25	.24	.15	.09
Blueflag Root bags	lb.	.18	.23	.27	.18	.20	.13
Boldo Leaves bales	lb.	.15	.17	.17	.15	.15	.12½
Boneset Herb bales	lb.	.09	.10	.10	.07½	.07½	.07
Leaves bales	lb.	.11	.12	.12	.11	.09½	.....
Borage Flowers bales	lb.	.16	.17	.17	.16	.17	.17½
Broomtop Herb Cut bales	lb.	.10	.11	.11	.10	.10	.07½
Bryonia Root bags	lb.	.10½	.12	.12	.10½	.10½	.12
Buchu Leaves							
Buchu Leaves Short 250 lb bbls	lb.	.50	.55	.55	.44	.48	1.40
Long bales	lb.	.75	.80	.80	.75	.75	1.30
Buckbean Leaves bales	lb.	.13	.15	.15	.13	.12½	.07½
Buckthorn Bark bags	lb.	.05	.05½	.05½	.05	.05	.20
Berries bags	lb.	.45	.50	.50	.45	.52½	.18
Burdock Root bags	lb.	.12	.14	.14	.12	.11½	07
Seed bags	lb.	.65	.....	.....	.65	.58½	.08
Burgundy Pitch, 110 stand gross for net	lb.	.08	.09	.09	.08	.08	.04
Imported	lb.	.12	.13	.13	.12	.11½	.06½
Calabar Beans bags	lb.	.25	.27	.27	.25	.27½	.25
Calamus Root, blchd cases	lb.	.....	.40	.40	.37	.38½	.23
Unbleached, bags	lb	.06½	.07	.07	.06½	.06½	.09
Calendula Petals, imp bales	lb.	.90	.95	.95	.90	.82	.40
Calisaya Bark, bales	lb.	.23	...	...	.23	.25	.17
Powdered, bbls	lb.	.28	.32	.32	.18	.28	.....

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Digitalis Leaves
Doggrass Root
Fennel Seed
Foenugreek Seed
Fumigating Pastilles
Gamboge
Gentian Root
Hellebore Root
Henbane Leaves
Henna Leaves
Insect Flowers
Juniper Berries
Lavender Flowers
Licorice Cuttings
Licorice Root 1 lb. & 5 lb. bundles
Orris Root, Florentine
Olive Oil
Quassia
Quince Seed
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is being felt constantly. While the small stock is merely a temporary condition, its relief was promised some time ago and it has not occurred as yet. However, it is not likely that another month will pass without the spot market being much more freely supplied.

Belladonna Leaves — The tone of the market is easier than it was a month ago. Also the prices being asked for leaves are slightly lower at 19c @ 23c per pound. The market is expected to show an easy tone for some time to come as the root is also in an easy position and there appear to be plentiful supplies on the primary market.

Benzoin Gum — The Siam product remains unavailable on spot with prices nominal. The powdered and Sumatra products are still obtainable at 65c @ 68c per pound with sellers very firm at these figures and offerings none too plentiful in any direction.

Beth Root — Holders of spot supplies are filling the occasional orders that come their way at firm unchanged prices of 18c per pound.

Blood Root — This market is being held in a firm condition by sellers here. Stocks are no more than normal in size and demand is of good proportions. The primary market reports steady conditions with collections coming through in good shape.

Blueflag Root — An easier condition prevails in this market and sellers have lowered their quotations by 2c per pound over the month and are now naming 18c @ 23c per pound as to seller and quality. This is the lowest price in effect so far this year.

Buchu Leaves — The market is very firm on spot with holders naming 50c @ 55c per pound for the small lots available. It will be remembered that prices were lowered to 44c a month ago to stimulate business in an over supplied market. The business was very well stimulated and dealers are close to cleaned out of holdings. Goods for future arrival are offered at 46c per pound here. Long leaves are unchanged as to price or position here and in the primary markets. Holders of spot goods are naming unchanged prices of 75c @ 80c per pound as to quantity and quality.

Buckthorn Bark — Although strength has been present in this product for some time past, this strength has not been reflected in the prices quoted for spot goods which still stand at 5c @ 5½c per pound.

Caraway — The tone of this market has been easy due to large visible supplies and prices are therefore lower at 9½c @ 10c per pound for Dutch seed.

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Canary Seed, South America, bags	lb.	.04½	.05	.05	.04½	.04½	.06
Dutch, bags	lb.	.05¾	.06½	.06¼	.05¾	.05¾	.09
Candelilla Wax, bags	lb.	.27	.28	.28	.27	.33	.22
Cannella Alba Bark, bales	lb.	.30	.32	.32	.30	.32	.08
Cannabis True, Imp, bags	lb.	.....	.....	.....	.....	.....	1.55
American (no assay), bale	lb.	.23	.....	.25	.23	.25	.26
USP	lb.	.22	.30	.30	.22	.25	1918
Cantharides, Chinese, cases	lb.	.70	.72	.72	.70	.70½	.63
Powdered, bags	lb.	.80	.88	.88	.80	.90	1.60
Russian, cases	lb.	.60	.65	.65	.60	.60	2.00
Powdered, boxes	lb.	.80	.....	.80	.80	.73¾	2.25
Caraway Seed, African, bags	lb	.12	.....	.12	.12	.12	1918
Dutch 11 lb bags	lb.	.09½	.10	.12	.09½	.11	.08
Cardamon Bleached, cases	lb.	.....	2.00	2.00	1.50	1.60	1.30
Decorticated, cases	lb.	1.50	1.60	1.60	1.35	1.55½	1.15
Carnauba Wax No. 1, bags	lb.	.57	...	.57	.57	.60	.45
No. 2 bags	lb.	.55	.....	.55	.55	.54	.42½
No. 2 N Country, bags	lb.	.36	.....	.36	.36	.41½	.32
No. 3 N Country, bags	lb.	.34	...	.34	.34	.36	.29
No. 3 Chalky, bags	lb.	.39	.40	.40	.39	.39	.33
Cascara Amarga, 150 lb bbls	lb.	.90	.....	.90	.90	.90	.....
So called bales	lb.	.60	.85	.85	.60	.62	.82
Cascara							
Cascara Sagrada, bales, 1923 bark	lb.	.20	.....	.20	.20	.20	.....
1924 bark	lb	.18	.....	.18	.18	.18	.....
1925 bark	lb.	.16	...	.16	.16	.16	.....
1926 bark	lb	.15	.16	.16	.15	.15	.....
1927 bark	lb.	.14	.15	.15	.14	.90	.....
Cascarilla Bark, quills, bales	lb.	.90	1.00	1.00	.90	.....	.22
Siftings, bbls	lb.	.65	.....	.65	.65	.65	.11
Cassia Batavia No. 1 bbls	lb.	.15	.16	.16	.13½	.12½	.18
Shortstick, bales	lb.	.12½	.13	.13	.11½	.11½	.11
Batavia, No. 3, bales	lb.	.10¾	.11	.11	.09¾	.09¾	1918
China Select Rolls, cases	lb.	.09	.09½	.13½	.09	.12	.07½
Broken, bales	lb.	.07	.08	.09¾	.07	.07¾	.05¼
Saigon, thin	lb.	.22	.23	.23	.22	.18¾	.28½
Buds, cases	lb.	.18½	.19	.19	.18¼	.17½	.11½
Fistula, baskets	lb.	.15	.14	.24	.15	.16¼	.06½
Catnip, Herb, bales	lb.	.18	.23	.23	.18	.18	.08¼
Celery Seed, bales	lb	.19	.20	.20	.19	.19¾	.17½
Ceresin Wax, White, bags	lb.	.15	.20	.20	.15	.15	.14
Yellow, 200 lb bags	lb.	.11	.14	.14	.11	.11	.12
Imp., 100 lb bags	lb.	.25	.38	.38	.25	.25	.....
Chamomile							
Chamomile Flowers Roman, bales	lb.	.21	.24	.33	.21	.21½	.15
Hungarian, cases	lb.	.17	.18	.19½	.17	.26½	.35
Charcoal Willow, powd, bbls	lb.	.06	.06½	.06½	.06	.06	.....
Wood, powd, bbls	lb.	.04	.05	.05	.04	.04	.04
Chestnut Bark	lb.	.07	.08	.08	.07	.....	.....
Leaves bales	lb.	.06	.06½	.06½	.06	.06	.05
Chicle Gum, lb bbls	lb.	.58	.75	.75	.58	.58	.60
Chiretta, bales	lb.	.28	.....	.25	.25	.25	.14
Cinchona							
Cinchona Bark, Red Quill, bales 10 inch	lb.	.65	.....	.65	.65	.68½	.....
20 inch	lb.	.68	.....	.70	.68	.70	.....
40 inch	lb.	.85	.....	.85	.85	.85	.....
Chips, 150 lb bags	lb.	.23	.27	.27	.23	.23	.12
Cinnamon, Ceylon No. 1, bales	lb.	.62	...	.62	.62	.59	.30
No. 2 bales bend	lb.	.57	.58	.61	.57	.58	.29
No. 3 bales	lb.	Nom.	.....	Nom.	Nom.	.44½	.28
Clover Tops, Red, bags	lb.	.10	.11½	.11½	.10	.11½	.08
Cloves, Zanzibar, 135 lb bbl	lb.	.19½	.20	.19	.18	.20	.15½
Cochineal, Black	lb.	.69	...	.69	.69	.69	.44
Silver	lb.	.85	.....	.85	.85	.84½	.42
Cohosh Root, Black, bags	lb.	.09	.....	.09	.09	.07½	.04
Blue, bags	lb.	.09	.....	.09	.09	.08	.05
Colchicum Root, bags	lb.	.06	.07	.07	.06	.06½	.11
Seed, bags	lb.	.25	.....	.25	.25	.23	.20
Columbo Root							
Columbo Root, bags	lb.	.06½	.07	.07	.05	.4½	.06
Colocynth Pulp, bales	lb.	.95	1.00	1.00	.85	.81	.23
Coltsfoot Leaves, bags	lb.	.10	.12	.12	.10	.10	.06
Comfrey Root, bags	lb.	.14	...	.14	.14	.10½	.08
Condurango Bark, bags	lb.	.13	.14	.14	.13	.13	.12½
Conium, Herb, bags	lb.	.11	.12	.12	.11	.11	.06
Seed, bags	lb.	.11	.12	.12	.10	10	.09
Copaiba Balsam Para, see Balsams							
Coriander Seed, Bombay, bags	lb.	Nom.	.....	Nom.	Nom.	.07½	.08
Morocco, bags	lb.	.12½	.13	.13	.09½	.05½	.4½
Bleached, bags	lb.	.18	.19	.19	.16	.12½	.05
Corn Silk, bales	lb.	.06	.....	.06	.06	.06	.08
Cotton Root Bark, bales	lb.	.13	.13½	.13½	.13	.12	.06½
Cowhage, 1 oz tins	lb.	1.00	.....	1.00	.95	.96½	.....
Cramp Bark, So called bales	lb.	.06	.07	.07	.06	.06½	.06½
True, bags	lb.	.50	.55	.55	.50	.49	1918
Cranesbill Root, bags	lb	.10	.....	.12	.10	.11	.07½
Cubeb Berries							
Cubeb Berries, XX bags	lb.	.48	.53	.53	.48	.48	.42
Powdered, boxes	lb.	.50	.55	.55	.50	.57½	.42
Culvers Root, bags	lb.	.20	.22	.22	.19	.18	.14
Cumin Seed, Malta, bags	lb.	.14	.14½	.15	.14	.12½	.10
Morocco, bags	lb.	.14	.14½	.15	.14	.12¼	1918
Cuttlefish, Bone Trieste, Straps	lb.	.13	.....	.13	.13	.13	.14½
French, boxes	lb.	.12½	.15	.15	.12½	.12½	.12½
Powdered, bbls	lb.	.09	.10	.10	.09	.09	.05
Broken, bales	lb.	.05	.....	.05	.05	.05½	.05
Damiana Leaves, bales	lb.	.23	.22	.30	.23	.30	.08
Dandelion Root, Imp, bags	lb	.16	.17	.17	.14	.14½	.10½

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Cardamons — This market continues to climb as has been the case for some time past. There is no relief in sight for many months ahead as replacements from India are insufficient to meet current needs.

Cascara Sagrada — There appears to be no foundation to the reports of shading in this market. If shading occurred it was of such nature that it would not affect the general market, but was just a confidential transaction between a merchant and a very large consumer. The new bark will not be available until late spring or early summer and no definite change is anticipated until close to that time, if any change occurs then.

Cassia — The Batavian market has advanced steadily due to limited supplies in that country and some of the other markets have advanced somewhat in sympathy. The best advice now points to still higher prices for Batavian goods in the future. Chinese goods are still being freely offered and prices on these goods are lower.

Chamomile Flowers — The stocks of both Roman and Hungarian flowers on spot are quite large considering the size of demand. Dealers are anxious to move a good part of these stocks into consumers' hands rather than hold them themselves and consequently prices on both grades of flowers are now below last month's quotations. Roman flowers are freely offered at 21c @ 24c per pound as to seller and quantity, and Hungarian flowers are quoted at 17c @ 18c per pound.

Cinchona — The reduction made last month in 20-inch squills is still in effect and the market appears to be firm at that reduction. Other grades are also firm as stocks appear to be well balanced with consumption and the primary market is steady.

Columbo Root — Holding at last month's advance to 6½c @ 7c per pound in a firm condition, with demand and supply apparently well balanced at these prices.

Colocynth Pulp — A shortage of spot material has driven this market sharply higher and goods are not obtainable under 95c @ $1.00 per pound as to seller and quality. There seems to be great difficulty in obtaining the right grade of material from the primary markets. The merchants have written letter after letter as to what grade they must have, but still the material that arrives is not satisfactory. It is not the fault of the shippers but of the collectors. The shippers have to take what goods the collectors bring them.

Condurango Bark — This market is in somewhat freer supply on spot and dealers

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Deer Tongue Leaves, bales	lb.	.15	.18	.18	.15	.19	.07½
Digitalis Leaves, bales	lb.	.38	.42	.42	.30	.30	1918
Dill Seed, bags	lb.	.07	.07½	.07½	.07	.05½	.07½
Cleaned, bags	lb.	.08	.....	.08	.08	.08	.08
Dogwood Bark, Jamaica bags	lb.	.09½	.10½	.10½	.09½	.09½	.05
American bales	lb.	.06½	.....	.06½	.06½	.06½	.07½
Doggrass Root USP, cut bags	lb.	.12	.12½	.12½	.12	.13	.06½
Dragons Blood Mass, cases	lb.	.65	.70	.70	.65	.69	.25
Reeds, boxes	lb.	.95	.....	.95	.95	.95	.45
Echinacea Root, bags	lb.	.30	.33	.33	.30	.30	.22
Elcampane Root, bags	lb.	.08	.09	.09	.08	.08	.06½
Elder Flowers, bags	lb.	.19	.22	.22	.19	.15	.11
Elemi Gum, 85 lb cases	lb.	.....	.26	.26	.20	.20	.....
Elm Bark, bundles	lb.	.26	.....	.26	.24	.21½	.17
Grinding bags	lb.	.13½	.14	.14	.13½	.13½	.09
Powdered, bbls	lb.	.20	.22	.22	.20	.20½	.....
Ephedra Vulgaris, bales	lb.	.24	.2[illegible]	.25	.24	...31½	.....
Ergot							
Ergot, 150-200 lb bags	lb.	1.45	2.00	2.00	1.45	1.22	.....
Eucalyptus Leaves, bales	lb.	.....	.10	.10	.07	.05	.04
Euphorbia Pilulifera, Herb, bags	lb.	.08	.08½	.08½	.08	.08	.08
Euphorbium Gum, cases	lb.	.14	.20	.20	.14	.14	.12
Powdered, boxes	lb.	.25	.....	.25	.25	.25	...
Fennel Seed, French, bags	lb.	.17½	.19	.19	.17½	.11½	.06½
German, bags	lb.	.29	.32	.32	.28	.24½	.10
Fenugreek Seed, 200 lb bags	lb.	.05	.06	.06	.05½	.05½	.03
Fish Berries, 100-125 lb bag	lb.	.06	.07½	.07½	.06	.06	.03½
Flax Seed, Whole 182 lb bbls	lb.	14.00	14.75	14.75	14.00	14.10	10.00
Ground 180 lb bbls	lb.	.08	.08½	.08½	.08	.08	1918
Flea Seeds Black bags	lb.	.20	.22	.25	.16	.38	.....
Fringe Tree Bark or Root bags	lb.	.25	.27	.27	.23	.22	17½
Fumigat.Pastilles Red Bulk lb boxes	lb.	.30	.35	.35	.30	.30	.20
Galangal Root bags	lb.	.11	.13	.13	.11	.14	.08
Galbanum Gum, cans	lb.	1.15	1.25	1.25	1.00	1.59	.60
Gamboge Gum, 100 lb cases	lb.	1.30	1.35	1.35	1.20	1.09	.66
Powdered, cases	lb.	.....	1.35	1.35	1.25	1.22½	.65
Gelsemium Root, bags	lb.	.09	.10	.10	.09	.09	.05
Gentian Root							
Gentian Root, bags	lb.	.09½	.11	.11	.09½	.08½	.06½
Ground bbls, boxes	lb.	.13	.14	.14	.13	.11½	.....
Powdered, bbls, boxes	lb.	.13	.....	.13	.13	.02½	.....
Ginger, African, bags	lb.	.12	.12½	.12½	.10½	.09½	.05
Jamaica Grinding, bags	lb.	.17	.18	.18	.17	.14½	.15
Cochin ABC & Lemon, bags	lb.	.18	.19	.19	.16	.14	.06½
Ginseng Root, cultivated cs	lb.	8.00	10.00	10.00	8.00	8.00	5.00
Wild Southern, cases	lb.	8.50	10.00	10.00	8.50	8.50	6.00
Fibers, cases	lb	3.75	4.00	4.00	3.75	3.75	.....
Golden Seal Root, bags	lb.	4.30	4.50	4.50	5.30	4.65	4.50
Powdered, boxes	lb.	4.75	4.80	5.25	4.75	5.26	5.15
Herb, barrels	lb.	1.25	1.30	1.30	1.25	1.25	.47
Grains of Paradise, bags	lb.	.40	.45	.50	.40	.40½	.15
Grindelia Robusta, Herb, bale	lb.	.09	.10	.10	.09	.09	.05
Guaiac Gum, 150 lb cases	lb.	.38	.40	.40	.38	.39	.27
Powdered, strained, 75 lb cs	lb.	.70	.75	.75	.70	.64½	1918
Guarana, tin cases	lb.	Nom.	.....	2.00	1.65	1.65	1.80
Gum, see Arabic Gum, etc							
Hellebore Root, Black, bbls	lb.	.05½	.06	.06	.05½	.05½	.06
Powdered	lb.	.12	.13	.13	.12	.11	.....
White, 250 lb bbls	lb.	.07½	.08½	.08½	.07½	.07½	1918
Powdered	lb.	.12	.14	.14	.12	.11	.10
Helonias Root, bags	lb.	.80	.....	.80	.80	.74	.50
Hemp Seed, bags	lb.	.04½	.05	.05	.04½	.04½	.02½
Henbane Leaves, USP, bales	lb.	.19	.20	.23	.19	.25	.14
Henna Leaves							
Henna Leaves, bales	lb.	.12½	.13	.13	.12½	.12½	.13
Powdered	lb.	.16	.....	.16	.16	.16	.....
Honey, Calif., 120 lb cases	lb.	.11	.12	.12	.11	.11	1918
Hops, bales	lb.	.25	.26	.26	.25	.27	.17
Horehound, Herb, bales	lb.	.08½	.09	.09	.08½	.08½	.06½
Hydrangea Root, bales	lb.	.....	.09	.09	.08	.08½	.07
India Gum, see Karaya							
Insect Flowers	lb.	.32	.35	.35	.22	.22½	.18
Powdered, Pure, 200 lb bb	lb.	.40	.42	.42	.32	.26	.22
Ipecac							
Ipecac Root, Cartagena, bags	lb.	2.90	3.10	3.30	2.90	3.29	1.42½
Powdered, 220 lb bbls	lb.	3.30	3.35	3.65	3.30	3.74	1918
Rio Whole, bags	lb.	3.35	3.40	3.40	3.35	3.51	2.00
Powdered, 110 lb bbls	lb.	3.40	3.50	3.50	3.40	3.74	1918
Isinglass, American, 130 lb cases	lb.	.95	1.00	1.00	.95	.95	.71
Russian (Beluga), boxes	lb.	4.50	.....	4.50	4.50	4.50	3.50
Jaborandi Leaves, bales	lb.	.13	.....	.13	.13	.12	.14
Jalap Root, Whole, 150 lb bag	lb.	.16	.18	.18	.16	.17½	.21
USP, Powd, 250 lb bbls	lb.	.22	.24	.24	.22	.23½	.....
Japan Wax, 24 lb cases	lb.	.18½	.19	.19	.18½	.19½	.11
Job's Tears, White, bags	lb.	.15	.....	.15	.15	.15	.08
Juniper Berries							
Juniper Berries, 125 lb bags	lb.	.06	.06½	.07½	.06	.07	.03½
Sifted, bags	lb.	Nom.	.....	Nom.	Nom.	.....	.....
Kamala, boxes	lb.	.85	.90	.95	.85	.94½	.57
Karaya Gum, Powdered, bbls	lb.	.12	.20	.13	.12	.12	.15
Kava Kava Root, bags	lb.	.16	.....	.16	.16	.15½	.18
Kino Gum, Black, cases	lb.	.50	.55	.55	.50	.50	.22
Kola Nuts, 150 lb bags	lb	.09	.....	.09	.09	.09	.08
Kousso Flowers, bags	lb.	.70	.....	.70	.70	.72	.....
Lady Slipper Root, bags	lb.	1.50	...	.90	.90	.62	.24
Larkspur Seed, bags	lb.	.....	.30	.40	.30	.61	.25

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EST. 1860

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BELLADONNA LEAVES
BOLE ARMENIA
BUCKTHORN BARK
CALAMINE PINK
CALAMUS ROOT, BLEACHED
CASCARA SAGRADA
CASTILE SOAP
CHARCOAL, POWDERED
CHALK, HEAVY
CHALK, LIGHT
CHAMOMILE FLOWERS
CHERRY BARK, WILD
CINCHONA BARK
COLOCYNTH PULP
COUCH GRASS, CUT
DIGITALIS LEAVES
DRAGON'S BLOOD
ELM BARK
FENNEL SEED
FLEA SEED
FOENUGREEK SEED
GALANGAL ROOT
GENTIAN ROOT
GINGER ROOT
GOLDENSEAL
HELLEBORE ROOT
HENBANE LEAVES
HENNA LEAVES
INSECT POWDER
IPECAC ROOT
JALAP ROOT
JUNIPER BERRIES
KAMALA
KARAYA GUM
LAVENDER FLOWERS
LICORICE ROOT
LODESTONE
NUTGALLS
NUX VOMICA
OLIBANUM GUM
ORRIS ROOT
RHUBARB ROOT
SARSAPARILLA ROOT
SASAFRAS BARK OF ROOT
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have shaded their prices in consequence. They are now naming 13c @ 14c per pound openly.

Culver's Root — A reduction of 2c per pound to a basis of 20c @ 22c per pound was made by some of the merchants on spot goods. The shipment market was slightly easier, although no real weakness was apparent in the market.

Damiana Leaves — Market has held steady throughout the month with goods plentiful at unchanged prices of 23c @ 30c lb. as to seller and quantity.

Dandelion Root — Stocks are quite well depleted in many quarters and consequently holders are firmer in their quotations. The range of prices now stands at 16c @ 17c per pound, although some lots remained available at 15c per pound. It was generally agreed that the market was pointed higher if the demand continued brisk.

Elder Flowers — Holders of stocks are still firm in their quotations which show no variation from those of last month. Goods are selling at 19c @ 22c per pound as to seller and quantity.

Ergot — The market is extremely quiet with consumers buying in a very small and cautious manner. The only actual spot goods that has passed the Government inspection are held at $1.95 @ $2.25 per pound. However, Russian ergot is being offered at $1.45 per pound subject to pass Government inspection, and while some lots of this material have been rejected, large lots have also been passed. The situation appears as though practically all consumers are very well supplied. However, they are making purchases of the Russian material simply as a safeguard against the future. If the material does not pass inspection it does not mean that the importer will not be able to fulfill his order as many excess lots are arriving. Also the failure of a lot to pass does not mean that the consumer will be short, as they are buying merely as a precaution.

Fennel Seed — The market for German seed is in a much stronger position and offerings are now firmly held at 29c @ 32c per pound. The French seed is also very firm in tone although rumors of higher prices were not general in their application and consequently were obtained only in a limited way.

Flea Seeds — Very heavy spot stocks have weakened this market and dealers are now freely offering goods at 20c @ 22c per pound.

Fringe Tree Bark — Spot market is supplied with high priced goods and holders have advanced their quotations to a basis of 25c @ 27c per pound.

Galbanum Gum — The material now

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Laurel Berries, bags	lb.	.08	.09	.09	.08	.08	.05
Leaves, Greek, bags	lb.	.06	.07	.07	.05½	.05¼	.10
Italian, bales	lb.	.05	.....	.05	.05	.05	.03½
Lavender Flowers, Ordinary	lb.	.30	.35	.35	.30	.30	.20
Selected	lb.	.45	.55	.55	.42	.44¼	.28
Lemon Peel, bags	lb.	.09½	.10	.10	.09½	.10	.06½
Licorice Root							
Licorice Root Russian, Whole bbls	lb.	.12	.18	.18	.12	.12	.06
Spanish Natural bales	lb.	.05½	.07	.07	.05½	.05½	.04½
Powdered, bbls	lb.	.09	.10	.10	.09	.09	.....
Selected 2 & 5 lb bbls	lb.	.14	.16	.16	.14	.13	.09
Cutting, 125 lb bags	lb.	.06½	.07	.07	.06¼	.06½	.06½
Turkish, 150 lb bales	lb.	.05	....	.05	.05	.05	.....
Linden Flowers with leaves, bales	lb.						
Bales	lb.	.33	.....	.33	.30	.22	.35
Without leaves, bales	lb.	.....	.32	.32	.27	.23	1918
Liverwort Leaves, bales	lb.	.17	.18	.20	.16	.17½	.....
Lobelia, Herb, bales	lb.	.18	.20	.20	.16	.63½	.09½
Seed, bags	lb.	.75	.75	.75	.75	.88	.25
Lovage Root, Imp, bags	lb.	.25	.27	.27	.25	.21½	.22
Lupulin N. F., tins	lb.	1.75	.....	1.75	1.75	1.61	1.75
Lycopodium, 88 lb. cases	lb.	.74	.85	.85	.74	.81	.41
Mace							
Mace Siauw No. 1, cases	lb.	.95	.96	.96	.88	.95	.....
Banda No. 1, cases	lb.	1.00	1.02	1.00	.94	1.00	.64
Batavia No. 2, cases	lb.	.67	.68	.68	.65	.73	.49
Malva Flowers, Blue, bales	lb.	.50	.....	.50	.50	.46	.30
Black, bales	lb.	.45	.60	.60	.45	.49	1918
Leaves, bales	lb.	.14	.15	.15	.14	.14	....
Manaca Root, bales	lb	.22	.....	.22	.22	.61	.60
Manna, Large Flake, cases	lb.	.65	.....	.70	.65	.....	.85
Small Flake, cakes	lb.	.....	.58	.60	.50	.53	.39
Sorts, cases	lb.	.45	.....	.50	.45	.43	.....
Mandrake Root bags	lb.	.....	.18	.....	.....	.13	.11
Marjoram, Herb	lb.	.....	.....	.....	.....	.21½	.10
French No. 1 bales	lb	.14½	.15½	.15½	.14½	.22	.10
German, bales	lb.	.14	.15½	.15½	.14½	.....	.18
Mastic Gum, 120 lb cans	lb.	.60	.65	.65	.60	.52½	.62
Matico Leaves bales	lb.	.35	.....	.45	.35	.83	.25
Mesereon Bark bags	lb.	.....	.....	.....	.....	.12½	.09
Millet Seed Yellow, bags	lb.	.04½	.04¾	.04¾	.04½	.04	.01½
Montan Wax, Crude, bags	lb.	.06½	.07	.07	.06½	.06	.06½
Bleached, bags	lb.	.25	.28	.28	.25	.25	.24
Moss, Iceland, bales	lb.	.07½	.08	.08	.07½	.07½	.05½
Select	lb.	.15	.....	.15	.15	.15	.....
Irish, Bleached, bales	lb.	.11	.12	.12	.11	.11	.08
Mullein Flowers, tins	lb.	2.25	.....	2.25	2.25	2.22	.51
Leaves, bales	lb.	.07½	.08	.08	.07½	.07½	.06
Musk Root, Russian, bags	lb.	.18	.25	.25	.18	.26½	.12
Mustard							
Mustard Seed, Bombay Brown, bags	lb.	.05½	.06½	.06½	.05½	.05½	1918
California, Brown, bags	lb.	.07½	.08	.08	.07½	.08¼	.05
Yellow, bags	lb.	.16	.....	16	.16	.16	.07
Chinese, Yellow, bags	lb.	.06½	.07	.07	.06	.07	.....
Dutch, Yellow, bags	lb.	.07½	.07¾	.07¾	.07¼	.08	1916
English, Yellow, bags	lb.	.08½	.09	.09	.08¾	.09½	.06
Myrrh Gum, 200 lb, cases	lb.	.70	.75	.75	.62	.30½	.16
Nutgalls, Chinese, bags	lb.	.22	.....	.22	.22	.22	.15
Aleppy, bags	lb.	.25	.....	.25	.25	.26	.15
Powdered, bags	lb	.23	.....	.23	.23	.20	.....
Nutmegs, 110's cases	lb.	.37	.38	.38	.33½	.36	.13½
75's & 80's cases	lb.	.49	.50	.50	.42	.47	.15
Grinding, bags	lb.	.54	.55	.59	.48	.47½	.13½
Nux-Vomica							
Nux-Vomica Buttons, bag	lb.	.05	.05½	.05½	.05	.08	.04
Powdered, 200 lb bbls	lb.	.08	.08½	.08½	.08	.08	.07½
Oak Bark, Red, bags	lb.	.06½	.....	.06½	.06½	.06½	.08
White, bags	lb.	.04½	.06	.....	.06	.06	.03
Olibanum Gum 280 lb cases Siftings	lb.	.....	.13	.11½	.13	.....	.....
Tears No. 1, all white	lb.	.25	.29	.....	.....	.10½	.04½
No. 1 Extra	lb.	.27	.30	.29	.27	.27	.....
No. 2	lb.	.20	.....	.20	.18	.16½	.....
No. 3	lb.	.14	.15	.15	.14	.11¼	.....
Opium Gum, USP, cases	lb.	12.00	13.00	13.00	12.00	12.00	7.70
Granular, cans	lb.	13.00	14.00	14.00	13.00	13.00	8.75
Powdered, USP, cans	lb.	13.00	14.00	14.00	13.00	13.00	8.65
Orange Flowers, cases	lb.	.25	.....	.25	.25	.25	.....
Peel, Bitter, bags	lb.	.10	.....	.10	.10	.10	.07½
Sweet, bags	lb.	.08½	.....	.08½	.08½	.08½	.04
Orris Root							
Orris Root Flor. bid, bags	lb.	.10	.11	.11	.10	.09	.19
Powdered, 200 lb bbls	lb.	.13	.15	.15	.13	.12½	1918
Verona, bags	lb.	.09	.10	.10	.09	.08½	.14
Powdered, 200 lb bbls	lb.	.13	.14	.14	.13	.12	.....
Fingers, boxes	lb.	.90	.....	.90	.80	.64	.75
Ozokerite Wax, Brown, Hard	lb.	.....	.....	.....	.....	.....	.21
Bags	lb.	.24	.25	.25	.24	.24	.....
Green, Hard, bags	lb.	.30	.31	.31	.30	.30	.25
Yellow, Refined, bags	lb.	.37	....	.37	.37	.37	.25
Papain, Crude, 150 lb cases	lb.	4.50	4.90	4.90	4.50	4.85	2.80
Pure, Powdered, 10 lb bot	lb.	4.25	4.35	4.35	4.25	5.25	.....
Paprika, bags	lb.	.25	.26	.26	.25	.33	.....
Pareira Brava Root, bags	lb.	.11	.12	.12	.11	.11	.14
Parsley Seed, bag	lb.	.25	.....	.25	.25	.27	.20

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available on spot was imported at higher prices and consequently the spot market has moved up 15c per pound, and is now held at $1.15 @ $1.25 per pound.

Gamboge Gum — A further advance of 5c per pound was recorded in this product during the month. Stocks are now offered at $1.30 @ $1.35 per pound, with powdered at $1.35 @ $1.40 pound.

Ginger— While the market for Jamaica was easier with prices at 17c @ 18c per pound, African and Cochin were sharply higher at minimums of 12c and 18c per pound respectively.

Golden Seal Root — The powdered root was lower on spot at $4.75 @ $4.80 per pound. The whole root was easy at $4.30 @ $4.50 per pound as to seller and quantity.

Grains of Paradise — Dealers are offering goods at lower prices of 40c @ 45c per pound, which is a reduction of 5c per pound from last month's closing prices. Freer supplies on spot is the reason for the easy condition.

Henbane Leaves — A reduction of 2c per pound has been made in the spot market which now quoted at 19c @ 20c per pound. The primary market is easy and spot stocks are large considering the rate at which consumers are taking on supplies.

Insect Flowers — The Japanese market is still high with the Dalmatian prices following suit. There is no definite reason given as to why the market in Japan is high and probably none is known. The whole flowers are quoted at 32c @ 36c per pound as to seller and quality. Powdered goods are firmly priced at 40c @ 42c per pound as to seller and quantity.

Ipecac Root — The whole market is easier due to the Rio root coming through in better supply and the temporary shortage being relieved. Cartagena whole root is now quoted at $2.90 @ $3.10 per pound, with powdered at $3.30 @ $3.35 per pound. Rio whole is offered at $3.35 @ $3.40 per pound, and Rio powdered at $3.40 @ $3.50 per pound. The situation is expected to remain easy.

Liverwort Leaves — The market is firmer in tone and goods are now quoted at a minimum of 17c per pound.

Mace — Shortage of supplies in the primary markets and higher prices there has resulted in an advance in the spot market with holders quoting 95c @ 96c per pound for Siauw No. 1, and 65c @ 67c per pound for Batavia No. 2.

Nux Vomica — There has been no change in the spot or shipment markets for this product. Demand is of good volume but is thoroughly routine in character and there is nothing to indicate any radical swing to firm or weak.

		Current Market		1928 High	1928 Low	1927 Aver.	1914 July
Passion Flower, bales	lb.	.08	.09	.09	.07	.07	.08
Patchouli Leaves, bales	lb.	.27	.29	.29	.26	.26	.10
Pennyroyal, Herb, 100 lb bags	lb.	.07	.....	.07	.07	.07	.07
Leaves, 100 lb bags	lb.	.14	.16	.16	.14	.16	.04
Pelitory Root, bales	lb.	.18	.19	.19	.18	.16	.20
Pepper, Singapore, bags	lb						
Black bags	lb.	.....	.38	.38	.30	.30	.11½
White, bags	lb.	.....	.60	.60	.54½	.48	.18½
Aleppy, bags	lb	.41	.41½	.41½	.36½	.30½	.11½
Lempong, bags	lb.	.41	.41½	.42	.38	.31	.10½
Tellecherry, bags	lb.	.41	.42	.42	.38	.31	.11½
Muntock, bags	lb.	.62	.....	.62	.53	.43½	.....
Red Chillies,	lb.						
Japan No. 1 bags	lb.	.26	.....	.26	.26	.26	.14
Mombasa, bags	lb.	.38	.39	.39	.38	.30	.14½
Capsicum, Bombay, bags	lb.	.21	.22	.22	.21	.21	.....
Peppermint							
Peppermint Leaves, Imp, bales	lb.	.50	.....	.50	.50	.50	.42
Domestic, bales	lb.	.24	.27	.40	.24	.24	.11
Herb, bundles	lb.	.12	.....	.12	.12	.12	.....
Peru Balsam, see Balsams	lb						
Pichi Leaves, bags	lb.	.13	.14	.14	.13	.13½	.12
Pimento Select, bags	lb.	.18	.18½	.18½	.16½	.17	.04½
Pink Root, True, bags	lb.	.62	.....	.62	.62	.53½	.65
Pitch Burgundy, see Burgundy Pitch							
Pleurisy Root, bags	lb.	.22	.....	.22	.22	.20	.15
Poke Berries, bags	lb.	.....	.30	.30	.20	.26	.08
Root, 200 lb bales	lb.	.09	.10	.10	.09	.09	.05½
Pomegrant Bark of Root, bags	lb.						
Bags	lb.	.20	.22	.44	.20	.25½	.12
Bark of Fruit, bags	lb.	.30	.....	.30	.30	.30	.06
Bark of Tree, bags	lb.	.15	.18	.21	.15	.21	.....
Poppy							
Poppy Flowers, Red, bags	lb.	.60	.65	.65	.60	.60	.40
Heads, bags	lb.	.50	.....	.50	.50	.50	.25
Seed, Dutch, bags	lb.	.11	.12	.12	.11	.13	.06½
German, bags	lb.	.08½	.09½	.10	.08½	.10	.....
Blue Indian, bags	lb.	.10½	.....	.10½	.10½	.10½	1917
White, Indian, bags	lb	.25	.....	.25	.25	.25	1917
Prickly Ash Bark	lb.	.14	.17	.17	.14	.14	.14
Southern bags	lb.	.13½	.14	.16	.13½	.14	.14
Northern, bags	lb.	.20	.25	.25	.20	.21	.25
Berries, bags	lb.	.....	.22	.15	.14	.14	.08
Prince's Pine, bales	lb.	.....	.17	.13	.12	.12	.30
Pulsatilla, Herb, bags	lb.	.....	.14	.25	.16	.16	.12
Pumpkin Seed, bags	lb.	.16	.....	.06½	.06½	.06	.06½
Quassia Chips, bags	lb.	.06½	.....	.36	.36	.44½	.11
Quebracho, bulk, 125 lb bbl	lb.	.....	.35	.09	.07½	.07½	.....
Queen of the Meadow, Herb	lb.	.07	.08	.08	.07	.07	.07
Root, bags	lb.	.....	.07	.....	.....	.....	.....
Quince Seed bags	lb.	.60	.70	.75	.60	.60	.60
Cape, bags	lb.	1.25	1.50	1.50	1.25	1.16½	.56
Rape Seed, South American bags	lb.	.05	.06	.06	.04½	.05	.....
Dutch, bags	lb.	.06	.06½	.06½	.05½	.08	.....
Japanese, small bags	lb.	.06½	.07	.07	.06½	.06½	1916
Raspberries, Dried, bbls	lb.	.85	.....	.85	.85	1.03	.27
Red Saunders, bags	lb.	.08	.....	.08	.08	.08	.....
Ground	lb.	.12	.....	.12	.12	.12	.....
Rhatany Root, bags	lb.	.11	.12	.12	.11	.10	.11
Rhubarb Root, HR, cases	lb.	.40	.42	.45	.43	.45	.21
Powdered, bbls	lb.	.47	.48	.53	.47	.56	.....
Rosemary Leaves, bales	lb.	.....	.06	.06	.05	.05	.03
Flowers cases, bales	lb.	.25	.30	.30	.25	.25	1918
Rose Petals, pale	lb.	.45	.....	.38	.38	.30	.18
Red	lb.	1.60	1.70	2.20	1.70	1.85	1.75
Rue, Herb, bales	lb.	.18	.20	.20	.18	.18	.08½
Sabadilla Seed, bags	lb.	.30	.33	.35	.30	.33	.15
Powdered, bbls	lb.	.32	.33	.33	.32	.39	.....
Saffron							
Saffron Flowers, American, bales	lb.	.....	.35	.38	.36	.39	.44
Valencia, 1 lb cans	lb.	13.00	14.00	16.00	13.00	17.00	11.50
Sage Dalmatian, bales	lb.	.07	.....	.05½	.05½	.06	.04
Greek, bales	lb.	.04½	.....	.04½	.04½	.04½	1918
Sandarac Gum, 300 lb bbls	lb.	.30	.35	.35	.30	.30	.19
Sarsaparilla Root, Honduras, bales	lb.	.55	.58	.52	.52	.....	.65
Mexican, bales	lb.	.22	.29	.29	.22	.34½	.30
Sassafras Bark, Ordinary, bales	lb.	.16	.17	.17	.16	.15	.12
Select, bales	lb.	.26	.27	.27	.26	.26	.16
Savory Leaves, bales	lb.	.08	.09	.09	.08	.08	.03½
Saw Palmetto Berries, bags	lb.	.14	.16	.20	.14	.64	.09
Scammony Resin, boxes	lb.	1.30	1.35	1.35	1.30	1.30	1.75
Root, bags	lb.	.08½	.....	.08½	.08½	.08½	1918
Senega Root, bags	lb.	1.27	1.30	1.30	1.27	.90	.50
Senna							
Senna Alex., 150 lb cases	lb.	.25	.30	.30	.25	.23	.35
Half leaf, 150 lb cases	lb.	.13	.15	.15	.13	.13	.30
Sifting, 400 lb bales	lb.	.10½	.11	.11	.10½	.10½	.13
Pods 310 lb bales	lb.	.17	.18	.18	.17	.....	.....
Powdered, 200 lb bbls	lb.	.16	.17	.17	.16	.17½	1918
Tinnevelly, Bold, 350 lb bbls	lb.	.15	.17	.20	.15	.17	.06
Medium Leaf, bbls	lb.	.09	.10	.13½	.09	.12	.08½
Small Leaf, bbls	lb.	.07	.08	.08½	.07	.07½	.....
Pods, 350 lb bbls	lb.	.....	.10	.13	.11	.....	.05
Powdered, 200 lb bbls	lb.	.10	.11	.10	.11	.10½	1918
Serpentaria Root, bags	lb.	.75	.77	.77	.75	.76	.42

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64 Water Street, New York

Drugs and Spices

Standard Purchasing Power of the Dollar: July 1914 $1.00 - Jan. 1927 68.7c - July 1927 71.7c - Feb. 1928 68.4c

Paprika — This market has eased off and goods are now freely offered at 25c @ 26c per pound as to quantity. The easy condition is expected to continue for some time to come.

Passion Flower — Dealers have raised their quotations for spot supplies to 8c @ 9c per pound representing an advance of 1c per pound. The strengthening of the market is due to slight depletion of spot supplies caused by a rather heavier demand than was anticipated all at this time. The goods afloat are expected to relieve the market of any real strength.

Patchouli Leaves — These are in better supply on spot and dealers have eased their prices down to a level of 27c @ 29c per pound.

Pepper — The pepper market has gained considerable strength and prices on all grades have shown substantial advances. However, factors do not expect any further advances as they think the top has been reached, and that the market will probably be dull at the high prices. The high prices are quite well justified by conditions in the primary markets.

Pomegrant Bark — A rather sharp reduction has taken place in the bark of root to 20c @ 22c per pound, and in the bark of tree to 15c @ 18c per pound. The primary market is lower and these lower priced goods are now arriving on spot and driving down the whole market here.

Rhubarb Root — Powdered is easier in price and is now quoted at 47c @ 48c per pound. This is merely a case of slightly excess stocks in some directions finding a more ready outlet.

Saffron—Spanish saffron continues to ease off as offerings become more plentiful. There is nothing to indicate that the market will strengthen for some time to come.

Sarsparilla Root — The market for the Mexican goods has moved down 5c per pound over the month and is now quoted at 22c @ 29c per pound. The primary market is weak and goods on spot are plentiful.

Saw Palmetto Berries — The over-supplied condition of this market continues to result in lower quotations, and it is doubtful if any are being sold even at the latest reduction. Goods are now openly quited at 14c @ 16c per pound, with 12c per pound probably acceptable on a large order. The primary markets are glutted with berries as is the spot market.

Senna — While Alexandra holds steady at unchanged prices, Tinnevelly is lower on all grades, the reduction varying from ½c to 2c per pound.

		Current Market	1928 High	1928 Low	1927 Aver.	1914 July
Shellac, T. N., bags	lb.	.57	.58	.58	.57	.50	.15½
Simaruba Bark, bales	lb.	.11	.18	.18	.08	.07½	.11
Skullcap Leaves, Eastern, bales	lb.	.....	.35	.40	.33	.45	.15
Western, bales	lb.	.23	.26	.26	.23	.23	.....
Skunk Cabbage, Stripped, bales	lb.	.14	.16	.16	.14	.12½	.10
Snake Root, Canada Natural, bags	lb.	.27	.30	.30	.27	.28½	.14
Canada, Stripped, bags	lb.	.55	.....	.55	.55	.55	.40
Soap Bark, 150-200 lb bbls	lb.	.14	.....	.14	.14	.13	.09
Cut, 125-175 lb bags	lb.	.17	.....	.17	.17	.15	.10½
Crushed, 200 lb bbls	lb.	.16	.....	.16	.16	.15	.09½
Powdered, bbls	lb.	.18	.....	.18	.18	.17	.....
Spearmint Leaves, American, bales	lb.	.25	.30	.30	.25	.23	.15
Herb, bales	lb.	.14	.....	.14	.14	.14	.....
Spermaceti, blocks, cakes, cases	lb.	.32	.35	.35	.32	.32	.....
Spikenard Root, bags	lb.	.23	.25	.25	.23	.17	.10
Squaw Vine, bales	lb.	.20	.21	.21	.21	.18	.08
Squills, White	lb.	.12	.14	.14	.10	.06	.04
Powdered, bulk	lb.	.15	.....	.15	.15	.13	1918
Stavesacre Seed, bags	lb.	.17	.18	.19	.17	.17	.10½
Stillingia Root, bags	lb.	.12	.....	.12	.12	.22	.06
Stone Root, bags	lb	.08	.09	.09	.08	.08	.06
St. Ignatius Beans, bags	lb.	.14½	.15	.15	.14½	.15	.18
St. John's Bread, bags	lb.	.....	.09	.14½	.09	.14	.06
Stramonium							
Stramonium Leaves, bales	lb.	.19	.20	.20	.17½	.18	.07½
Seed, bags	lb.	.07½	.....	.07½	.07½	.07½	.08
Strophanthus Seed, Hispidus	lb	.07½	.....	.07½	.07½	.07½	.08
Kombe, bags	lb	2.25 to 2.50		2.25	2.00	1.98	.40
Styrax Liquid, Artificial	lb.	.26	.35	.35	.26	.26	.18
Genuine, USP	lb.	.36	.45	.45	.36	.36	.18
Sunflower Seed, bags	lb	.07	.08	.08	.06	.08	.04
South American, bags	lb	.06½	.07	.07	.06	.06	.....
Tagalder Bark, bags	lb.	.05	.06	.06	.05	.05	1918
Tamarinds, bbls,	lb.	.05½	.06	.06	.05½	.05½	.04½
Kegs	keg	3.85	.....	3.85	3.85	3.82	2.40
Tansy, Herb, bales	lb	.11	.14	.14	.11	.11	.07
Tar, Barbadoes, 50 gal bbls	lb.	1.40	1.45	1.45	1.40	1.40	.....
Thus Gum, 280 lb bbls	lb.	.11½	.20	.20	.11½	.11½	.03½
Tiila, see Linden							
Thyme							
Thyme, Spanish, bales	lb.	.08½	.09	.09	.08½	.08½	.07
French, bales	lb.	.08	.....	.08	.08	.08	.....
Tolu Balsam, see Balsams	lb.						
Tonga Bark, bags	lb.	.55	.....	.55	.55	.70	.40
Root, bundles	lb.	.55	.....	.55	.55	.66	.38
Vine, bundles	lb.	.55	.....	.55	.55	.66	.38
Tonka Beans, Angostura Cases		1.90	2.00	2.00	1.90	1.90	.....
Para cases	lb.	.90	.....	.90	.90	.90	.....
Surinam cases	lb.	1.25	1.50	1.50	1.25	1.25	1.10
Tragacanth Gum No. 1 100 lb cases	lb.	1.55	1.60	1.60	1.55	1.55	1.10
No. 2	lb.	1.40	1.50	1.50	1.40	1.40	.80
No. 3	lb.	1.25	1.30	1.30	1.25	1.25	.65
Powdered 50 lb boxes	lb.	.85	1.10	1.10	.85	.85	.....
Turkish cases	lb.	.45	.....	.45	.45	.45	.85
Turmeric Root Madras bags	lb.	.06	.06½	.06½	.06	.06	.04½
Aleppy bags	lb.	.07	.07½	.07½	.06½	.06½	.04½
Powdered	lb.	.10	.13	.13	.10	.10	.....
China bags	lb.	.09	.09½	.09½	.09	.09	.03½
Turpentine Venice True, 80 lb cases	lb.	.32	.40	.40	.32	.32	.23½
Artificial, 80 lb cs	lb.	.17	.....	.17	.17	.17	.08½
Unicorn Root, False, see Hellonias True, see Aletris							
Uva Ursi Leaves, bales	lb.	.06	.07	.07	.06	.05½	.03½
Valerian Root, Belgian, bags	lb.	.17	.18	.18	.17	.28	.07
Vanilla Beans, Mexican, whole, cases	lb.	3.25	4.00	4.00	3.25	4.50	4.00
Cuts, cases	lb.	2.50	2.75	2.75	2.50	2.75	3.12½
Bourbon, cases	lb.	2.00	2.75	2.75	2.00	2.30	3.37½
South American, cases	lb.	2.50	2.75	2.75	2.50	2.65	3.50
Tahiti, Green, label cases	lb	2.25	2.50	2.50	2.25	2.37½	2.25
Vetivert Root, 100 lb bags	lb	.30	.....	.30	.30	.33	.....
Violet Flowers, bags	lb.	.70	.....	.70	.70	.77½	.33
Wahoo Bark of Root, bags	lb.	.60	.62	.62	.60	.60	.42
Bark of Tree, bags	lb.	.30	.35	.35	.30	.31	.15
White Pine Bark, Roseed, bags	lb	.08	.....	.08	.08	.07½	.04
White Poplar Bark, bags	lb.	.06	.07	.07	.06	.06	.03½
Wild Cherry Bark, Thin, Green	lb.	.....	.....	.....	.....	.....	.07
Rossed, bales	lb.	.11½	.12	.12	.11½	.11½	.08
Thick Rossed, bales	lb.	.09	.....	.09	.09	.09	.....
Thin Natural, bales	lb.	.07	.08	.08	.07½	.07	.07
Thick Natural, bales	lb.	.05	.06	.06	.05	.05	.06
Wild Indigo Root, bags	lb.	.13	.14	.14	.13	.13	.....
Willow Bark, bags	lb.	.06	.....	.06	.06	.06	.07
White, bags	lb.	.15	.....	.05	.15	.15	.....
Witch Hazel Bark, bags	lb.	.06½	.08	.08	.06½	.06½	.03½
Leaves, bales	lb.	.08	.09	.....	.....	.08	.06
Wormseed, American, bags	lb.	.15	.....	.20	.15	.15	.09½
Levant, bags	lb	.....	.....	.....	.....	3.81	.36
Wormwood, Herb, Imp, bales	lb.	.10	.10½	.10½	.10	.09	.07
Yellow Root (Zanthorza), bags	lb.	.14	.....	.14	.14	.14	.....
Dock Root, bags	lb.	.10	.11	.11	.10	.09½	.06
Perilla Root, bags	lb.	.14½	.....	.14½	.14½	.14½	.08
Yerba Mate, bags	lb.	.18	.20	.20	.18	.18	.....
Santa, bags	lb.	.09½	.11	.11	.09½	.09½	.08
Zedoary Root, bags	lb.	.06½	.07	.07	.06½	.06	.04½

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ALOES—115 cases.
ANNATTO—204 bags.
ARECA NUTS—27,574 lbs.
ARGOLS—41,500 lbs.
ARROWROOT—30 cases.
ASOFETIDA—71 cases.
BALSAM—12,190 lbs. and 190 cases.
BARK—6,242 lbs., 5 bags and 8 bales.
  CASCARILLA—4 bales.
  CINCHONA—5,227 lbs. and 150 bales.
BAY RUM—10 bbls.
BERRIES—
  BUCKTHORN—1 bag.
  JUNIPER—1,524 lbs. and 20 bags.
BISMUTH METAL—16 cases.
CALOMEL—520 lbs.
CAMPHOR—5,786 lbs. and 500 cases.
  CRUDE—1,825 cases.
  FORMOSAN—1,125 cases.
CARDAMONS—9,411 lbs. and 20 cases.
CARRAGHEN EXTRACT—785 lbs.
CASSIA—129,681 lbs. and 250 bales.
  FISTULA—15,339 lbs.
CHRYSANTHEMUM—242 bales.
CINCHONIDINE—1 case.
  SULFATE—5 cases.
CINCHONINE—12 cases.
CINNAMON—155 bales.
COLOCYNTH—14 bales.
CORNSILK—4,505 lbs.
CUTTLEFISH BONE—4,400 lbs. and 40 straps.
DRUGS—2,180 lbs., 1 keg, 8 casks, and 15 cases.
ENOS SALT—200 cases.
EPHRADA VULGARIS—35 bales.
EPSOM SALT—320 casks, 240 kegs and 300 bags.
ERGOT—6,747 lbs.
ERYTHROL TETRANITRATE—3 cases.
ESSENCE—11,290 lbs., 337 cases and 10 drums.
FERNET BRANCA—75,262 lbs.
FERRUM OXYLAT SACCHARAT—1,267 lbs.
FLOWERS—450 lbs., 40 cases and 1 bag.
  CHAMOMILE—25 cases.
GINGER—285 casks and 140 bags.
GLYCERIN—161,287 lbs. and 190 drums.
GUM—
  ARABIC—22,563 lbs. and 2,758 bags.
  BENJAMIN—1,632 lbs. and 15 cases.
  CHICLE—2,738 bales.
  GUIACOC—5 bags.
  SANDARAC—10,021 lbs.
  STYRAX—1,630 lbs.
  TRAGACANTH—7,328 lbs., 10 bags, and 4 cases.
HELIOTROPINE—279 lbs.
HERBS—13,168 lbs., 91 bales, 5 cases and 532 bags.
HOPS—8,720 lbs., 79 bales and 5 cases.
KAMALA—32 bags.
LEAVES—22,735 lbs.
  BELLADONNA—4,908 lbs.
  COCOA—18,709 lbs.
  HENBANE—8 bales.
  PATCHOULI—78 bales.
  SAGE—177 bales.
  SENNA—22,368 lbs., 695 bales.
  PODS—25 bags.
STRAMONIUM—7,715 lbs and 169 bales.
LICORICE—
  PASTE—4 cases.
  POWDER—2 cases.
  PULVERIZED—10 cases.
  ROOT—4,917 tons and 62 cases.
LIME JUICE—79 casks , 24 bbls., 45 hogs heads and 3,304 lbs.
LUPULIN—3,804 lbs.
MACE—7,779 lbs., 204 cases, 49 bbls., and 6 bags.
MEDICINAL PLANT—11,345 lbs.
MEDICINES—10 cases.
MENTHOL—185 cases.
  SYNTHETIC—900 lbs.
METHYL SALICYLATE—2 cases.
MOSS, IRISH—20 bales.
NEO SAPIN—4,802 lbs.
NUTMEGS—66,717 lbs., 713 bags and 235 cases.
NUX VOMICA—2,000 pockets and 344 bags.
OILS—
  ALMOND—1,662 lbs.
  ANISE—22,000 lbs. and 11 drums.
  BAY—7 cases.
  BERGAMOT—8,864 lbs. and 200 cases.
  CAMPHOR—188 drums.
  CINNAMON—4,000 lbs.
  CODLIVER—434,132 lbs., 168 bbls. and 100 cs.
  CITRONELLA—9,992 lbs.
  ESSENTIAL—17,772 lbs., 290 cases and 5 drums
  EUCALYPTUS—200 cases and 6 drums.
GALANGAL—100 bbls.
GERANIUM—62,244 lbs.
LAVENDER—4 cases.
LEMON—6,415 lbs and 875 cases.
LEMON AND ORAGE—450 cases.
MINERAL—77,310 lbs.
MUSTARD—1,260 lbs.
ORIGANUM—6 drums.
PINE NEEDLE—1,029 lbs.
SANDALWOOD CAPSULES—708 lbs.
OPIUM—2,178 lbs.
ORANGE WATER—5 cases.
OVER TONIC—100 cases.
PAPAIN—4 cases and 57 packages.
PEPPER—286,495 lbs and 922 bags.
PERFUMERY—410 cases.
PIMENTO—3,064 bags, 6,645 cases.
PHARNS PRODS—151 lbs., 23 casks and 124 cases.
PYRETHRUM—646 bales.
QUILLAI WOOD—89,586 lbs. and 105 bales.
QUININE—87 cases.
ROOTS—15,866 lbs., and 66 bales.
  ALTHEA—550 lbs.
  BELLADONNA—13,756 lbs. and 10 bales.
  COLUMBO—86 bags.
  GINGER—50 bags.
  IPECAC—44 bags.
  ORRIS—12,286 lbs. and 136 lbs.
  SARSAPARILLA—24 bbls.
  VALERIAN—20 bales.
  ZACATON—90 bundles.
SACCHARIN—1 case.
SAFFRON—5 cases.
SALIUM PURIUM—220 lbs.
SAPONIN—306 lbs.
SEEDS—3,432 lbs. and 84 cases.
  ANISE—22,000 bags.
  CARAWAY—550 bags.
  CARDAMON—9 cases
  CORIANDER—22,046 lbs.
  DILL—90 bags.
  FENUGREEK—33,110 lbs.
  MEDICINAL—68,487 lbs.
  MUSTARD—44,400 lbs. and 1,910 bags.
  POPPY—2,915 bags.
  RAPE—1,568 lbs. and 234 bags.
SERUMS—1 case.
STOMALIX—4,501 lbs.
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TERPIN HYDRATE—10 kegs.
TERPINEOL—1 case.
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ACIDO MILK—18 cases.
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ANTIPHIOGISTINE—19,310 lbs., 7 bbls., and 368 cases.
ANISEED—3 bags.
ASAFETIDA—2 boxes.
ARROWROOT—1 bbl.
BALSAM—105 lbs.
BARK—
  BAYBERRY—535 lbs.
  CASCARILLA—12 bags.
  MEDICINAL—1,551 lbs.
  WILD CHERRY—571 lbs
CATHOLICON—16 cases.
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DRUGS—55 bundles, 3 boxes and 50 bundles.
DENTAL MAGNESIA—19 cases.
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DIOXOGEN—2 cases.
ETHER—20 drums and 2 cases.
EMULSION—8 pkgs. and 4 cases.
EPSOM—4 kegs and 1 bag.
FELLOWS SYRUP—3,978 lbs. and 72 cases.
FIG SYRUP—14,455 lbs. and 30 cases.
GLYCERIN—20 cases.
GLYCO THYMOLINE—1,120 lbs. and 170 boxes.
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  TRAGACAUTH—173 lbs.
HYPOPHOSPHATE SYRUP—1,744 lbs. and 4 cases.
HOPS—60 cases.
IODINE CRUDE—361 lbs.
IRISH MOSS—1 bale.
JALAP ROOT—1 bbl.
KROMOID— 30 bales.
LAUREL LEAVES—1 bale.
LIGNUM VITAL—3,597 lbs.
LINIMENT—2 cases.
LISTERINE—9,547 lbs. and 81 cases.
LYSOL—3 cases.
MAGNESIA MILK—1,314 lbs., 52 cases and 16 bbls.
MAGNESIA MILK & PHOSPHOMURIATE QUININE—43,832 lbs.
MANNA—3 cases.
MEDICAL CORDIAL—6 cases.
MEDICINES—22,957 lbs. and 6 cases.
MENTHOL—2 cases.
MUSTARD OINTMENT—1 case.
NUJOL—14,476 lbs. and 50 cases.
ODORONO—23 cases.
OIL—
  ALMOND—1,179 lbs. and 3 cases.
  BALSAM—2 drums.
  BAY—575 lbs. and 1 case.
  CODLIVER—18 cases.
  ESSENTIAL—486 lbs. and 14 cases.
  LEMON—81 lbs.
  ORANGE—270 lbs.
  PEPPERMINT—492 lbs. and 18 cases.
PHARMACEUTICAL PRODS.—13,220 lbs., 567 pkgs., 30 cases and 13 cartons.
PHENOLGIN—303 lbs.
PHOSPHATE-NEURO—1 case.
PILLS—2 cases.
POTASSIUM BROMIDE—8,960 lbs.
PROTOZYN—31 cases.
QUININE—1 bundle.
QUININE PHOSPHO CHLORIDE—1 case and 30 cartons.
  SULFATE—1 box and 1 case.
RADWAY'S MEDICINE—5 cases.
ROOTS—
  COHOSH—4 bags.
  SARSAPARILLA—414 pkgs.
  SENEGA—118 lbs.
SAL HEPATICA—798 lbs., 139 cases and 4 bundles.
SALTS EFFERVESCENT—15 cases.
SCOTT'S EMULSION—4,132 lbs., 108 cases and 18 cartons.
SENNA LEAVES—1 bale.
SLOAN S LINIMENT—3,880 lbs., 1,191 cases, 15 bundles.
SODIUM BICARBONATE—23,494 lbs., 138 kegs and 6 cases.
SULFUR BITTERS—1,562 lbs., 36 boxes, 40 cases and 42 packages.
VANILLA BEANS—2 cases.
WITCH HAZEL—
  CRUDE—30 bbls.
  EXTRACT—1 bbl.
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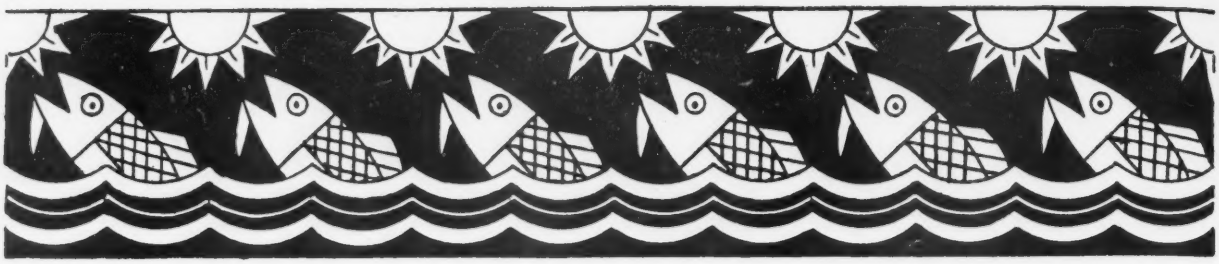
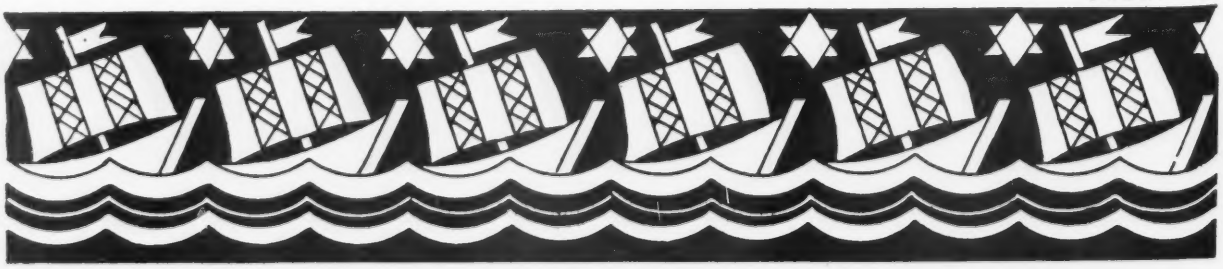


NORWEGIAN MEDICINAL COD LIVER OIL

It is a matter of scientific fact that Norwegian medicinal cod liver oil is far superior to any other product in so far as its vitamin content — so necessary for growing children — is concerned. Norwegian medicinal cod liver oil is produced according to the most modern methods, a characteristic trait being that it is practically tasteless and odorless. It has a pronounced growth-promoting and anti-rachitic effect.

FABRITIUS



Finest Lofoten COD LIVER OIL Medicinal Quality

"A-A BRAND"

The recognized standard, known for its high vitamin contents. Guaranteed the finest Lofoten non-freezing medicinal cod liver oil

P. R. DREYER Inc.

Sole Representative in the United States

26 CLIFF STREET - - - NEW YORK

CHICAGO PHILADELPHIA KANSAS CITY BALTIMORE ST. LOUIS BOSTON

Part of the Aarsaether fishing fleet in port at one of the accumulating stations situated at Vardo, Norway.

AALESUND - BRÖDR. AARSAETHER A/S - NORWAY

BORAX and BORIC ACID

Guaranteed 99½ to 100% Pure

Crystal - Granulated - Powdered

REFINED and U. S. P.

The Purity of
20 Mule Team Borax
Products is Never Questioned

PACIFIC COAST BORAX CO.
100 William St., New York
Chicago Los Angeles

KIELLAND'S BRAND

COD LIVER OIL

NORWEGIAN

Finest U. S. P. - Medicinal - Non-Freezing

Also Specialists in Cod Liver Oil for Poultry

For Import and Immediate Spot Delivery

W. BENKERT & CO., Inc.
81-83 Fulton Street New York

H.J. BAKER & BRO.
ESTABLISHED 1850

"VITAMOIL"
finest medicinal non-freezing
NORWEGIAN COD LIVER OIL
Refined by Albert Mohn, Bergen, Norway

GLYCERINE
Chemically Pure Guaranteed B. P. Test
Importers of all grades—Specializing in
English German Dutch
manufacture
Stocks available in New York City

"STURGEON BRAND"
PRECIPITATED CHALK
manufactured by John & E. Sturge, Ltd., Birmingham, England
Uses: Specially prepared for Dentifrices, Cold Creams, Toilet Preparations.
Guarantees: Free from grit—Uniform U. S. P. —B. P. Specifications.

REFINED CAMPHOR
Granulated Powdered Tablets

THYMOL CALOMEL
BENZOIC ACID
Agents for Howard & Sons, Ltd., London, England

Spermaceti
Magnesite (Grecian)
Magnesium Chloride
Formaldehyde
Oxalic Acid
Copper Sulphate
Senega Root
Caustic Soda
Soda Ash
Permanganate Potash

H.J. BAKER & BRO.
271 MADISON AVENUE
NEW YORK CITY

Importing Crude Drugs

(*Continued from page 214*)

customs custody, notifies the Chief of the Station of the Administration of the inability of the importer to return the goods to customs custody. The Station Chief then has an investigation made and reports to the Collector of Customs the facts determined, with his recommendation as to whether or not the bond should be forfeited. The Collector of Customs then makes a demand of payment in full for the amount of the bond, but the Secretary of the Treasury has authority to compromise for a smaller amount, if the circumstances warrant. However, as a matter of practice again, the Treasury Department customarily requests the Administration's comment on the case before an offer in settlement is accepted.

Standards

It is manifest that in judging the purity of a product we must have a standard as a guide. The Food and Drug Act makes the U. S. Pharmacopoeia and the National Formulary requirements for the products named therein the regular standards for such products, and it is under these standards that all such products are examined and judged.

There are, however, a number of crude drugs which are not official in the U. S. Pharmacopoeia or National Formulary, and for some of these the Department has issued announcements of standards for judging their purity, and with respect to others, the Department employs administrative standards or tolerances, that is, standards determined upon for use as guidance by officials of the Department for administrative purposes. All standards and tolerances are based upon the quality of good, average products which are produced, handled, prepared and sold by careful operators disposed to produce clean, sound and wholesome goods. Such tolerances as permit of small quantities of extraneous materials in crude drugs are not made on the basis of tolerating definite percentages of foreign matter in every case, but they are made with the idea of establishing the outside limit beyond which no product can be considered to fall in the legitimate class. The allowance of extraneous matter in the U. S. Pharmacopoeia and National Formulary, or under other standards, should not be interpreted to mean that it is permissible to add extraneous matter to drug products, instead they make allowance for such small quantities of extraneous materials as may be normal and nonpreventable under the best conditions of growing and collecting. Such tolerances are made only to permit of dealing in products which vary naturally in a reasonable and non-injurious extent from 100% perfection.

The foregoing represents in a brief fashion the requirements of the Food and Drug Act as applied to crude drugs, and the procedure used in enforcing the terms of the Act as applied to imports of crude drugs.

Unco Brand

OLIVE OIL

Packed in Italy
For Ungerer & Co. by Molino Coppirossi,
Imperia, Italy

THE finest of the Italian Olive Oil is produced in the northwestern section near the French border where soil and climatic conditions unite to yield an oil of smooth, bland and pleasing flavor comparable with the best French Olive Oil and much superior to the ordinary grade of Italian. Olive Oil packed for us under the Unco Brand represents the cream of the Italian Riviera production. It is available in drums, six gallon and one gallon cans and in quart and pint tins. A virgin oil, the first pressing from selected olives grown under the most favorable conditions, its quality and flavor are unsurpassed. Unco Brand is the inevitable choice of those who appreciate a really fine Olive Oil.

UNGERER & CO., New York

Barrett Standard

POLAR
NAPHTHALENE

Flake... Ball

The Barrett Company

40 Rector St., New York, N. Y.

SEYDEL
MEDICINAL CHEMICALS

BENZOCAINE U. S. P.

(Ethyl Amino Benzoate)
(ANESTHESIN)

An oil soluble local anesthetic employed in cough troches, toothache and earache remedies, suppositories, ointments, nasal creams, sprays, nausea tablets, etc.
Leaflets and formulas supplied on request.

In shaving creams and other preparations for the skin, Benzocaine is of value in allaying irritation.

SEYDEL CHEMICAL COMPANY
Jersey City, N. J. Nitro, W. Va.
Established 1904

THE "ACID TEST" OF ECONOMY IN MANUFACTURING

No matter how low the nominal price of a manufacturing service may seem to be, the real cost is dependent on quality. If you can be relieved of all production responsibility, with absolute confidence that the manufacture of your product is right, and can devote your whole time and attention to sales promotion, you are effecting a genuine economy and one that insures the utmost in profits.

Many of the largest and most successful advertisers of proprietaries in the country are our clients, because we can give them just such an economical quality service.

We have been pharmaceutical chemists for more than 90 years. Our plant is equipped with the latest up-to-date automatic machinery to handle every process—plus a triple inspection system to check.

Our service is complete. We manufacture your product in accordance with your formula, purchase all containers, labels, circulars, etc., pack, warehouse until shipped, and ship on your order direct to your customer, routing the goods the most economical way. All at a contract price determined in advance and usually cheaper than you could do it yourself!

We'll gladly answer your questions or submit figures. Just send us a sample of your product and tell us your problems. Or if you have only an idea, let us discuss that.

Write to-day. No obligations.

Strong Cobb Company, Inc.
PHARMACEUTICAL CHEMISTS SINCE 1833

83 Central Viaduct
Cleveland, Ohio

The Strength of Camphor

(Continued from page 216)

cellulose lacquers since lacquers emerged from their swaddling clothes about three or four years ago. Camphor has been entirely replaced in lacquers. If a law suit does exist between a lacquer manufacturer and an automobile maker, it does not concern the camphor in the lacquer as there is no camphor there.

The swing from over-production to well balanced production in Japan has caused a temporary swing to the short side, and this has been aggravated by the dealers here and in other countries, buying up all available spot and shipment supplies for several months ahead. To-day it is not possible to buy any camphor from Japanese exporters before May shipment from Japan. This does not mean that there will be no camphor to be had until that time, but that it is in the hands of dealers and can be had at a price above the prices indicated by Japan's export prices.

As to how long a high market can be held in the face of Japan's inability to ship before May, Japanese exporters are of the opinion that in a month of full operation the Japanese refiners can offer more camphor than can be consumed.

Pinaud, Inc., New York, in suit against Ritz Perfume Co., is awarded decision as to validity of trademarks, "Lilas de France" and "A la Corbeille Fleurie" and their use by defendant enjoined.

Lever Bro. & Co., Chicago, is denied registration of mark "Supercreamed" for soaps on opposition of Armour & Co. based upon registered mark of "Supercream" for shaving soaps.

NULOMOLINE No. 11

(Sucrose, Levulose, Dextrose)

Nulomoline No. 11 is a perfectly balanced syrup of high density. It will not ferment, crystallize or mould. Keeps indefinitely, contains no preservative.

To use as syrup: Reduce to the desired density by the addition of water — no percolating — no extra cleaning.

Nulomoline No. 11 is like glycerine in many respects and has long been used in various pharmaceutical preparations.

The Nulomoline Company

111 Wall Street **New York, N. Y.**

ACID CITRIC U.S.P.

Crystals, Granular, Powder

Barrels or Kegs

CITRATES—Potassium, Sodium, Lithium, Ammonium

All Scale Salts

MERCK & CO.

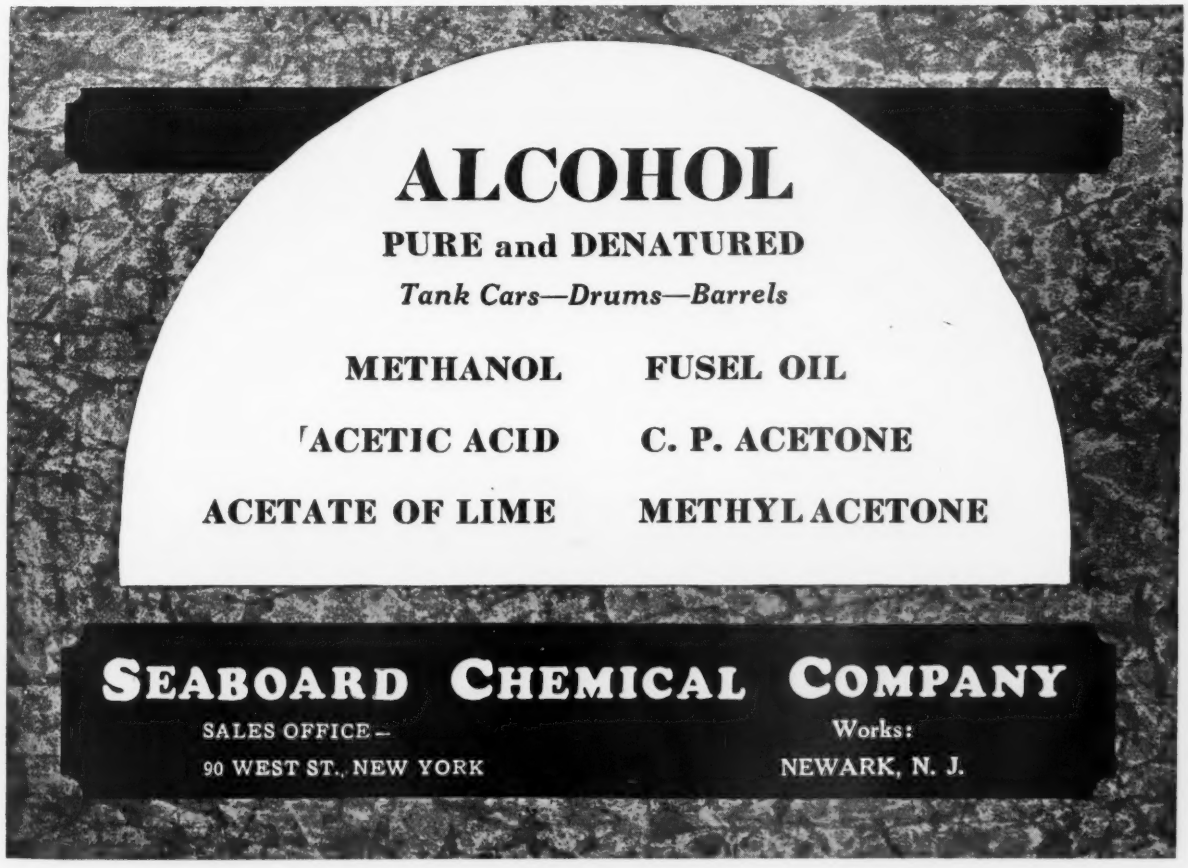
INC.

MANUFACTURING CHEMISTS

SUCCESSORS TO

POWERS-WEIGHTMAN-ROSENGARTEN CO.

Philadelphia New York **RAHWAY, N. J.** St. Louis Montreal



Handy for Tablets too!

Not only attractively lithographed in colors but a most convenient means of sealing tablet bottles as well.

Our Continuous Thread Screw Caps are used for both liquids and tablets by the nation's foremost and most discriminating manufacturers.

Bottle Closure Specialists Since 1890

Ferdinand Gutmann & Co.
168 39th St. Brooklyn, N. Y.

Also Makers of
SANISEAL METAL MILK CAPS
DISTILLED WATER CAPS
SPECIAL PURPOSE CAPS
CROWN CORKS

"Standard of Quality Always"

PLYMOUTH

MEDICINAL WHITE OILS

Russian *Domestic*

COLD CREAM OILS

and

ALL RAW MATERIAL FOR TOILET CREAMS

STEARATES

ZINC ALUMINUM MAGNESIUM

Made Right *Priced Right*

M. W. PARSONS IMPORTS
AND
Plymouth Organic Laboratories
55 ANN STREET, NEW YORK

Is Geranium Pointed Higher?

(Continued from page 232)

recent years, however, have been far below the values of former years.

The most peculiar things about geranium oil is the recent reversal of the price positions of the African and Bourbon oils. The African oil, desired by perfumers because of its much smoother and more rosy odor, has heretofore commanded a higher price than the Bourbon oil. At times the difference in cost between the two grades has reached four dollars per pound. The Bourbon grade, probably because of its former lower price, has been the grade used by soap makers. Now with the two grades selling at the same price in most instances, and with Bourbon oil selling higher in some cases, the soap maker will not be weaned away from Bourbon oil as he has accepted it as standard in his formula and naturally wants the same thing he has had before if the price is the same or close to it.

The low prices for geranium over the past few years are stated to be largely due to the entry of a large consumer into the primary market. This consumer was also a seller. As he had previously done in another product, he raised the standards of the geranium sold. His oil was of excellent quality. But he sold at very low prices and has always been described as a "disturbing element." The news has many times been current that this factor had withdrawn from the primary market. Now the rumor is circulated again. This time it is directly denied by the consumer in a letter to DRUG MARKETS.. The answer given to this denial by the bullish factors is to the effect that even though this consumer may continue to operate in geranium, he will no longer disturb the price situation, since he has been definitely brought into line by the other producers.

Just how this clearing up of the primary market has been accomplished, if in fact it has been accomplished, does not appear to be known in this country. However, it is easy to understand how the factors in the primary market could easily bring any American firm operating there into line with their views on price.

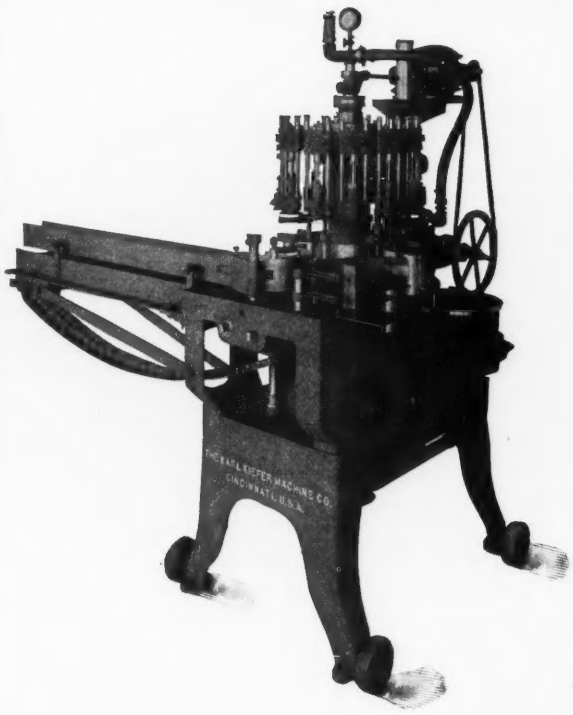
(Continued on page 282)

ALCOHOL!

Pure, Special & Completely Denatured

National Industrial Alcohol Co. Inc.

NEW ORLEANS, LA.



The Machine That Bottles

Phillips' Milk of Magnesia, Nujol, Sloan's Liniment, Scott's Emulsion, Squibb's Mineral Oil, Tanlac, Herb Juice, Piso's Cough Syrup, Mercurochrome, Glyco Thymoline, Packer's Tar Soap, Liquid Veneer, etc.

The Kiefer Automatic Rotary
Vacuum Filling Machine

Fills bottles accurately and neatly at high speed.

Requires only the loading of the bottles on the feed conveyor. No jamming; no breaking; no upsetting.

Waste of product is entirely avoided. Bad bottles are skipped.

Bottles may be discharged automatically upon belt or corking conveyor.

Made in four sizes.

If you are interested in cutting your production costs, write for catalog.

The Karl Kiefer Machine Company
Cincinnati, Ohio

Are Credit Losses Eating Into Your Profits?

SALES VOLUME is very nice. More power to the Sales Manager!

And more information to the Credit Manager—if your credit losses are to be kept to a minimum!

Not merely more information—but more *of the right sort of information.*

What is the right sort of credit information?

First, it must be up-to-date. Old information is as unsatisfactory as stale beer.

Second, it must be complete. What is left out may be more important than what is put in!

Third, it must be gathered and compiled by men intimately acquainted with the *drug trade.* We specialize and we know the trade. Your customer necessarily deals with our members—we are *continually* gathering information for them—our files are thus automatically kept up-to-date and complete.

Fourth, Credit Information must be in readily accessible form. For this reason we publish "The Brown Book" — listing, describing and rating over 115,000 firms in the drug and allied lines. We also issue Detailed Credit Reports; operate a unique Monthly Check-Up Service and collect delinquent accounts. Our position in the trade gives us a weapon of collection possessed by no other organization.

Data concerning our service, rates, etc., are yours for the asking.

CREDIT REFERENCE BUREAU, Inc.

1560 BROADWAY, NEW YORK

Representatives in Boston, Baltimore and St. Louis

Ask Me Another

1—What was the price of Phthalic Anhydride in March 1917 ?
2—What is Quillaja ?
3—Under what commercial grades is Gum Asphaltum commonly sold ?
4—Who are the American agents for Croda, Ltd. of Goole, England and for what product ?
5—Where are the plants of the Grasselli Chemical Co. located ?
6—What are industrial uses of Stannic Acid ?
7—Give the chemical name for Barytes and what is its common trade name ?
8—What is the telephone number of the following branch offices ?
(a) Du Pont, Chemical Division, Newark, N. J.
(b) General Dyestuffs Corp., Chicago.
(c) Solvay Sales Corp., Boston.
9—Can you give the address of five manufacturers of carboys ?
10—What is the duty on Sodium Arsenate ?
11—Who is the secretary and what is the address of the Compressed Gas Manufacturers' Association ?
12—Did the peak price of muriatic acid come during 1916 or 1920 ?
13—In what containers do the Dow Chemical Co. regularly supply Carbon Bisulfide ?
14—What is the boiling point of Amyl Buyterate ?
15—Do Roessler & Hasslacher have a branch office at Charlotte, N. C. at New Orleans, at Cleveland ?

In the new 1928 (Sixth Annual) Edition of

DRUG & CHEMICAL GUIDE BOOK

will be found the correct answers on the following pages:

[1, page 878, 2, p543; 3, p328; 4, p90; 5, p22; 6, p81; 7, p153; 8 (a) p729; (b) p779; (c) p755; 9, p685; 10, p925; 11, p922; 12, p897; 13, p201; 14, p128; 15, p37.]

These questions show vividly how packed with useful commercial information this invaluable, handy book is — what a variety of every day queries it answers — how many purposes it serves.

The new edition is just off the press: with two new features (1) the uses of all chemical and drug products (2) a directory of manufacturers of containers, shipping supplies, packing machinery, etc. Stoutly bound in red buckram cloth; 937 pages; price $1 postage paid delivered.

Put the Guide-Book on your desk to-day for a week's trial.

HAYNES PUBLICATIONS, INC.,
25 Spruce Street, New York, U. S. A.

Here is one dollar for which send me postage prepaid a copy of the 1928 GUIDE-BOOK, with the understanding that I may return the book, if not perfectly satisfactory, in a week and my money will be refunded.

Signed .....

Company .....

Address .....

Is Geranium Pointed Higher ?

(*Continued from page 280*)

There is nothing about the story that does not sound perfectly logical.

As to where the market will go if these statements prove to be facts, there are many predictions. Some look for a six or seven dollar market with perfect confidence, while some more conservative factors assume that a four dollar market will be the net result. In view of past performances, six or seven dollars does not seem unreasonable for geranium. Past performances, however, are meaning less and less to the cautious essential oil dealer who is still waiting for the sharp rises predicted for a long time in ever so many oils.

Narcotics

(*Continued from page 231*)

be done by the individual states by creating institutions for segregation, care and treatment of addicts. As long as addicts are permitted to remain at liberty on the streets of our cities where they have access to the drugs they will continue to create a demand for smuggled narcotics. The isolation and segregation of addicts for institutional treatment under restraint for a long period of time will greatly reduce the spreading of drug addiction among our people, and largely destroy the existing demand for smuggled drugs.

Present Enforcement Problem

The task of permanently destroying the source of supply of narcotic drugs for illicit use bespeaks the basic enforcement principle. This task is not easy; yet, it is now more definitely located. The fundamental and principal problem of enforcement is the elimination of smuggling. To do this requires the patient and diligent efforts of the best detective and investigative agents. Present facilities both with respect to the number of such officers (there can now be employed only 285 Federal narcotic field officers) and funds required for enforcement purposes are limited. To keep pace as well as possible with the activities of smugglers and peddlers requires constant attention to assignment of officers with such readjustments and arrangements necessary best to combat their activities. This is done constantly. The statistics of convictions of persons violating the internal control (Harrison) Act speak for themselves. If enforcement officials are provided with sufficient facilities, the smuggling problem can be eventually solved; if not, the best that can be hoped is to prevent the spread of the illicit traffic by pursuing the present methods.

STOKES EQUIPMENT

for

Every TABLET MAKING Need

Complete line of

Single Punch and Rotary Tablet Machines

Hand Operated Machines

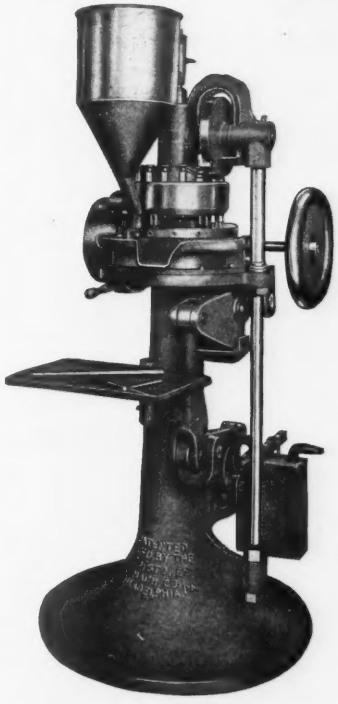
for the small manufacturer

Complete line of

Auxiliary Apparatus

MIXERS GRANULATORS DRYERS
COATING PANS POLISHERS COUNTERS

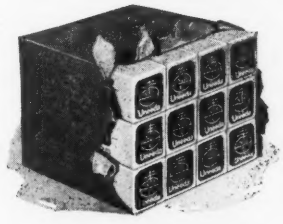
Free consulting service on all Tablet Making Problems

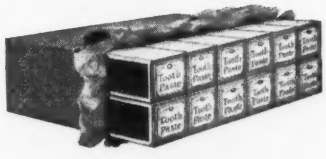


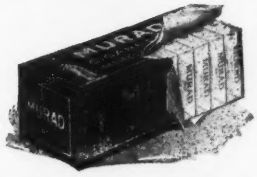
F. J. STOKES MACHINE COMPANY
5832 Tabor Road Olney P. O.
PHILADELPHIA

Large Savings

made by machine bundling







Showing various ways in which our machine stacks the packages.

Actual cost figures show that bundling packages in dozen lots by machine saves roughly 80% on the cost of cartons for packing such products as tooth paste, shaving cream, etc. Our bundling machine also saves $4000 to $5000 a year on labor!

Such astounding savings are too important to overlook —get in touch with us—find out how much we can save *you*. Write to our nearest office, sending a dummy of your package.

PACKAGE MACHINERY COMPANY
Springfield, Massachusetts

NEW YORK
30 Church Street

CHICAGO
111 W. Washington St.

The Drug Market-Place — Wants and Offers

Business Opportunities

DRUG PRODUCTS for export to Palestine. We are in a position to successfully market and advertise American products in Jerusalem and Jaffa. Established wholesale druggists since 1881. W. Schocher & Co. Care of T. M. Charlop, 926 Bronx Park South, New York City.

INDIAN DRUGS AND HERBS. We desire to export these to U. S. A. Will importers or brokers kindly write to India Agencies m.b.h., 16, Spitaler Street, Hamburg, Germany.

HAMBURG—We desire to export European Crude Drugs to U. S. A. Importers or brokers may apply to Dr. Schorr & Erwin Renyi Kommanditgesellschaft, Hamburg 36, Gr. Theaterstr. 41.

ESSENTIAL OIL IMPORTERS interested in oils produced in Palestine. These oils have long been exported to Europe and then to U. S. Direct connections desired. Oils of highest purity. Now producing thyme, organum, jasmin, and geranium. W. Schocher & Co. Care of T. M. Charlop, 926 Bronx Park South, New York City.

SALESMEN wanted who have an established trade with doctors and druggists in your territory, to sell an ethical indigestion powder called Cal-So-Gin, excellent side line, commission basis. Write for particulars. Lincoln & Bosworth, Chemists, Providence, R. I.

A remarkable proprietary medicine, result of years research, awarded Gold Medal and Diploma for a Scientific product, has Government alcohol permit, possibilities unlimited. Selling in United States and some foreign countries. Seeks party to advertise the product and take over exclusive selling rights for the world. Box 683 DRUG MARKETS.

NORWEGIAN PHARMACEUTICAL MANUFACTURER invites correspondence with American manufacturer or distributor for manufacturing or sales rights to new germicide. Box 690.

PRACTICAL, ECONOMICAL chemical processes with necessary drawings. Box No. 693 DRUG MARKETS.

Situations Wanted

POSITION WANTED—Chemist and Bacteriologist-University Graduate, more than ten years' diversified experience in laboratory work mainly on food products. Special knowledge of the manufacture of extracts and flavors. Have several years' sales experience in flavors, extracts, perfume and essential oils. Box 685 DRUG MARKETS.

GRADUATE CHEMIST, age 31, married, with 10 years experience as an executive in sales and manufacturing chemicals and specialties desires connection in the metropolitan district. Box 680 DRUG MARKETS.

SALES MANAGER now engaged. Well known and personally acquainted with wholesale drug, pharmaceutical and proprietary manufacturers throughout the country seeks new connection or sales agency for specialty preferably. Future opportunity paramount immediate recompense secondary. Box 677, DRUG MARKETS.

YOUNG MAN, 25 years experience as pricer, buyer, and department head in wholesale drug house wishes permanent connection. Could be sales manager in small house or assistant in large one. Services available January first. Located in the West at present. Box 676, DRUG MARKETS.

YOUNG GERMAN, two years' experience in this country, thorough pharmaceutical education abroad desires connection in any capacity that will give opportunity to learn the drug trade. Box 695.

Rates—All classifications $1.00 an issue for 20 words or less; additional words 5c each.

Payment must accompany order, add 10 cents if replies are to come to a box number and be forwarded.

DRUG MARKETS
25 Spruce St. New York

REPRESENTATIVE—Engineer available for firm not having New York office for transaction of business in sales, purchasing and settlement. Competent service given on yearly rate. Box 671, DRUG MARKETS.

LABORATORY CHEMIST, experience in essential oils and general work in toilet preparations, desires connection with large manufacturer with opportunity for technical advancement. Box 696.

PHARMACEUTICAL CHEMIST and general production superintendent; 15 years experience charge of every type of pharmaceutical department; thoroughly familiar with tablet production; can handle machinery, help, and any general problem; can also conduct research and analytical department; registered pharmacist. Box No. 697

POSITION as salesman wanted by young German with good education and experience abroad; has been employed in this country by two well known manufacturers in this trade; laboratory and stock room, and now anxious to secure a position in sales department. Box No. 698.

SALESMAN, ten years experience, acquainted with the wholesale drug trade and pharmaceutical manufacturers, desires position with reliable house, sell either fine chemicals or proprietary preparations. Box No. 694.

PHARMACEUTICAL CHEMIST with executive ability; University Graduate; superintendent of laboratory; 15 years experience in manufacturing tables, ointments and other lines of pharmaceuticals. Competent to take complete charge; 36 years old, single, best of references. Box 691.

Help Wanted

SALESMEN WANTED to sell Tablets on commission basis, by firm established twenty-three years. Men with organized trade with wholesalers preferred. Excellent side line. Reply fully stating experience. Confidential. Box 684 DRUG MARKETS.

SALESMAN—Experienced in selling Essential Oils, Flavors, Perfume materials to manufacturers, etc. Box 672, DRUG MARKETS.

SALESMEN—retail drug trade—sell new perfume novelties. Liberal commissions. State reference, particulars, territory covered. Box 681, DRUG MARKETS.

WANTED SALESMEN and demonstrators Lesculene, a preparation for pimples and skin irritations. Send 60c for sample and free offer. The Lesculene Co., Dept. R., Henderson, Ky.

SALES AGENTS WANTED—Manufacturer of Pharmaceuticals, Chemicals and Specialties wants Sales Agents to sell on commission basis to manufacturers, jobbers and chain store buyers. Representatives wanted in Chicago, Boston, Philadelphia, Cleveland, Los Angeles and other large cities. References required. Box 682 DRUG MARKETS.

Miscellaneous

PRIME CASCARA BARK furnished for immediate shipment. 1924, 1926 and 1927 peels in carload or smaller lots. C. F. Huffman, Crescent City, California.

INDIAN CRUDE DRUGS at cheapest rates from Abdullah Sons & Co., Amritsar, India. Cassia Fistula pods, Henna leaves, Kamala powder, Cannabis Indica, other botanical drugs, medicinal roots, herbs, leaves, gums, etc. Jasmine-Rose Marigold, Narcissus, Veti-veri, Pandanus, Lawsonia and Neroli Attars of high class, Oils of Cardamoms, Cinnamons, Patchouli Perfumed and Sandalwood Incense Sticks, Deer Musk, etc.

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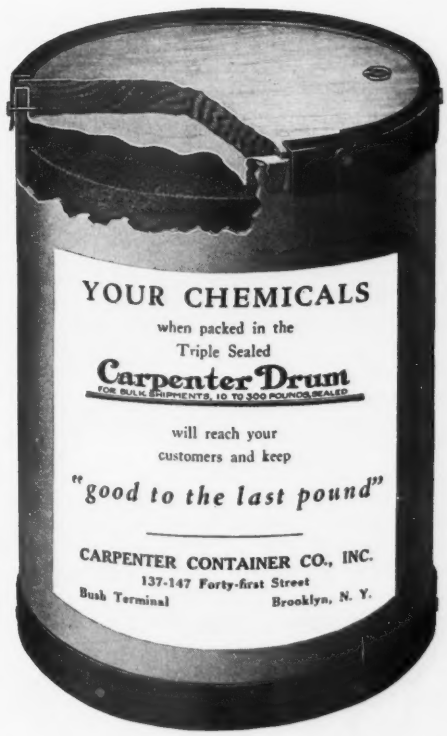

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Seaboard Chemical Co.

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P. R. Dreyer Inc.
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Fritzsche Brothers, Inc.
Givaudan Delawanna, Inc.
Morana, Inc.
N. V. Chemische Fabrik Naarden
Pfaltz & Bauer, Inc.
Rhodia Chemical Co.
Ungerer & Co.
Wangler-Budd Co., Inc.
Van Dyk & Co.

BEESWAX

Will & Baumer Candle Co., Inc.

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Wilson Laboratories

BORAX

American Potash & Chemical Corp.
Pacific Coast Borax Co.

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Hammill & Gillespie, Inc.
R. Hillier's Son Co., Inc.
Industrial Chemical Co.

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W. Benkert & Co., Inc.
P. R. Dreyer, Inc.

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Baird & McGuire, Inc.

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Pfaltz & Bauer, Inc.
Rhodia Chemical Co.
Ungerer & Co.
Wangler-Budd Co., Inc.
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Fries & Fries, Co.
Moranac, Inc.
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Ungerer & Co.
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GLYCERIN

H. J. Baker & Bro.
Will & Baumer Candle Co., Inc.

LANOLIN

B. & W. Co.
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Dissosway Chemical Co., Inc.
Dow Chemical Co.
Heyden Chemical Corp.
Hoffman-LaRoche Chemical Works, Inc.
Mallinckrodt Chemical Works
Merck & Co., Inc.
Monsanto Chemical Works
N. Y. Quinine & Chemical Works, Inc.
C. B. Peters Co., Inc.
Seydel Chemical Company

MINERAL OIL

Schliemann Companies, Inc.

NAPHTHALINE

The Barrett Company

PETROLATUM

Pennsylvania Refining Co.

QUININE

R. W. Greeff & Co.
Mallinckrodt Chemical Works
Merck & Co., Inc.
N. Y. Quinine & Chemical Works, Inc.

TALC

Hammill & Gillespie, Inc.

VANILLIN

Givaudan Delawanna Inc.
Mathieson Alkali Works, Inc. (Commonwealth Division)
Monsanto Chemical Works

CONTAINERS & CLOSURES

COLLAPSIBLE TUBES

Aluminum Co. of America
Bond Mfg. Corporation
Sun Tube Co.
White Metal Mfg. Co.
A. H. Wirz, Inc.

CORKS

Armstrong Cork Co.

BOXES (Paper)

F. N. Burt Co., Ltd.

BULK CONTAINERS

Carpenter Container Co., Inc.

GLASSWARE

Owens Bottle Co.

METAL CAPS

Aluminum Co. of America
American Metal Cap Co.
Ferd. Gutmann & Co.

VISCOSE CAPS

Capes-Viscose Inc.

MACHINERY & EQUIPMENT

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Alsop Engineering Co.
American Machine & Foundry Co.
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MIXING EQUIPMENT

Alsop Engineering Co.
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F. J. Stokes Machine Co.

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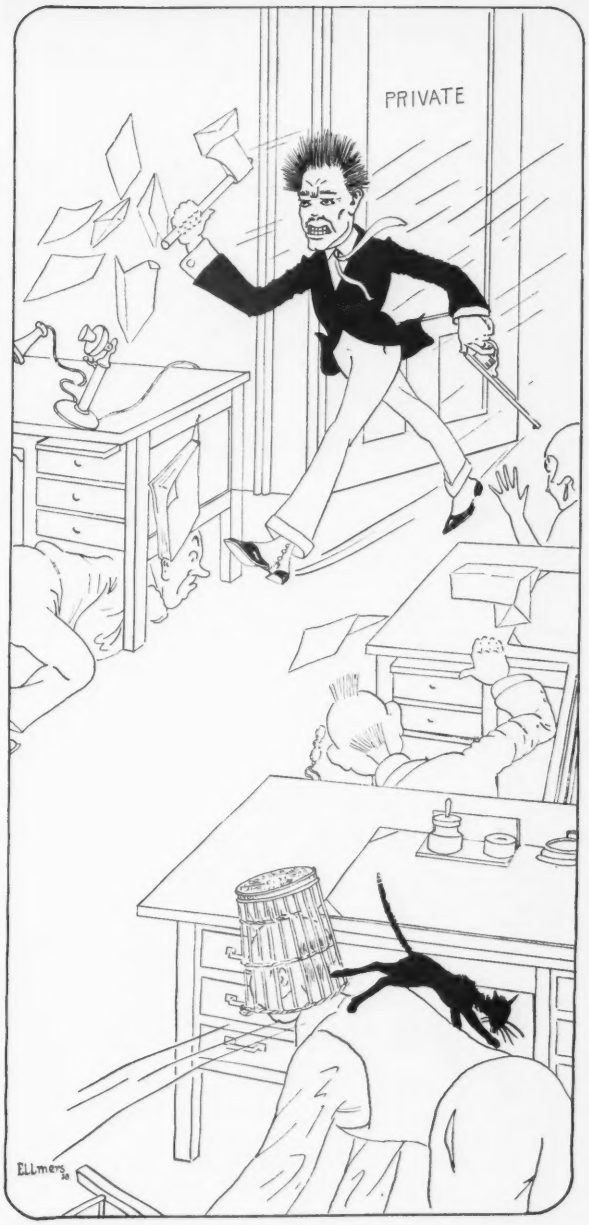

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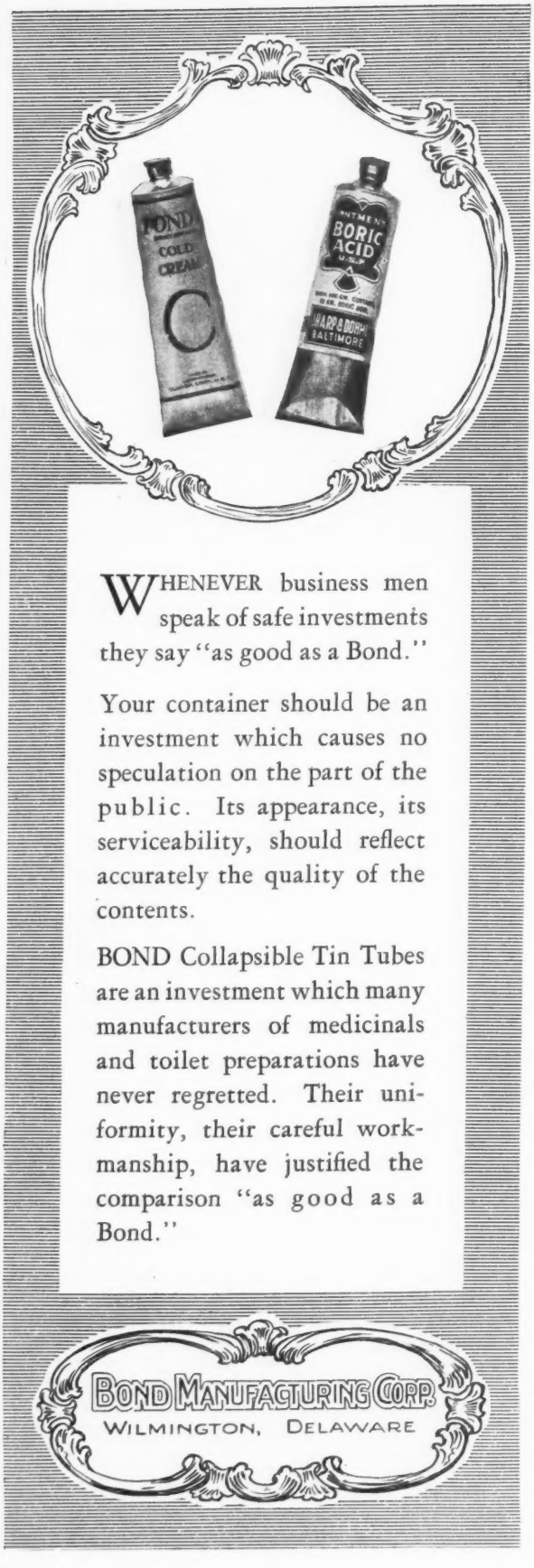
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Who's Who
in the Drug Industries

MELVIN C. EATON, vice-pres., The Norwich Pharmacal Co., Norwich, N. Y. Born: Norwich, N. Y., Apr. 2 1891; mar: Ethel L. Jewell, 14 Apr. 1915; children: 2 sons; educat: Univ. Mich. Ph.C. 1913, spec. work Med. Chirurgical Coll., Phila. 1914. Norwich Pharmacal Co., res. chem., July 1914; asst. supt., dir., asst. secy., & treas., 1919; vice-pres. in charge of production, Jan. 1, 1927. 1st Officers Training Camp, May 13, 1917; Commissioned Aug. 1917; Overseas July 1918 to June 1919. Commissions held, 2nd Lieut. 1st Lieut., Capt. Contr. articles on efficiency of various industrial publications having received 1st prize in "Manufacturing Industries" and "Industrial Power." Memb: N. Y. Drug Mfrs. Assn., N. Y. State Pharm. Assn., Amer. Pharm. Assn., Taylor Soc., Commndr. Amer. Legion, Frats, Phi Kappa Sigma, Phi Delta Chi. Clubs: Norwich City, (dir.); Canasawacta Country, (dir.); Shriner; Elk; Norwich Rotary, (pres. & dir.)

ARTHUR D. EMMETT, biochemist, Medical Research Dept., Parke, Davis & Co., Detroit, Mich. Born: Lee, Ill.; mar: Clara Bullard, Mechanicsburg, Ill.; children: (3) 1 daughter, 2 sons; educat: Peoria, Ill. H. S., Univ. Ill., B. S., M. A.: Columbia Univ. Ph. D. (biochem.), 1915. Ill. State Water Survey, asst. chem., 1901-2; Armour & Co., asst. chem., 1902-3; Univ. Ill. Nutrition Invest., assoc. chem.; Columbia Univ. assoc. Biochem.; Univ. Ill. Nutrition Inves., assoc. chief, 1906-15; Parke Davis & Co., Biochem. res., 1916 to date. Published numerous bulletins on nutrition from Agr. Exp. Sta., and paper in Journal Biol. Chem. and Jour. Amer. Chem. Soc. Memb: Phi Lambda Upsilon (pres. 1913-16), Sigma Xi, Frats.: Amer. Chem. Soc., Amer. Soc. Biochem.; Amer. Soc. Animal-Prod., Amer. Geog. Soc., Amer. Nature Soc., Amer. Assn. Adv. Soc. (fellow). Clubs: Town and Country. Hobby: motoring.

LEWIS L. EVANS, sales mgr., Huntington Drug Co., Huntington, W. Va. Born: 20 Dec. 1883, Sternville, Greene Co., N. Y.; mar: Ethel R. Johnson, Apr. 3, 1925, Elizabeth, N. J.; children: 1 son; educat: Country School. Gibson Snow Co., Inc., Albany, N. Y. 21 yrs., 3 mos. 16 yrs. as buyer; Huntington Drug Co., Huntington, W. Va., sales mgr. 2 yrs, 9 mos. Hobby: work.

CARSON PETER FRAILEY, secy., American Drug Mfrs. Ass'n. Washington, D. C. Born: 12 Aug. 1887, Emmitsburg, Md.; mar: Rebecca Gray Houck, 17 Jan. 1912, New York City; children: 1 son educat: high schl., Md. Coll., Pharm., Univ. Md., Ph.D., 1908 Retail Drug bus. 1908-12; Armour & Co., Chicago, Wash. rep., Lab. Dept., 1912-14; H. K. Mulford & Co., Phila., Wash. rep., 1914-20, sales mgr. 1920-23, Amer. Drug Mfrs. Assn. Washington, secy., 1923 to date. Major U. S. Army, Reserve Corps, Sanitary Sect.; awarded prize, membership in Amer. Pharm. Assn., for highest genl. average during 1908 Md. State Brd. Pharm. exam. Clubs: Kappa Psi Frat. Hobbies: music, books, golf.

ARTHUR DUNHAM HOLMES, dir. of research, The E. L. Patch Co., Stoneham, Mass. Born: Walpole, N. H. 19 July, 1884; mar: 1st, Edna F. Wright, Westminster, Vt.; mar: 2nd, Florence M. Lippincott, Phila. Pa., Nov. 18, 1922; children: one daughter; educat: Dartmouth Coll., B. S. 1906, John Hopkins Univ., Ph. D. 1911. Univ. Maine, instr. chem., 1906-7; Mass. Agri. Coll., 1907-8; U. S. Dept. Agr., res. chem., 1911-18; E. I. Du Pont Co., res. chem., 1918-21; E. L. Patch Co., dir. res. 1921 to date. Author or co-author of about 25 U. S. Agri. bulletins; 24 scientific papers published from E. L. Patch Co., res. lab. Memb: Amer. Chem. Soc., (chrmn. Northeastern sect., at present) Amer. Assn. Advance Science; Amer. Pharm. Assn.; N. H. Acad. Science; Assoc. editor Journ Oil & Fat Industry.

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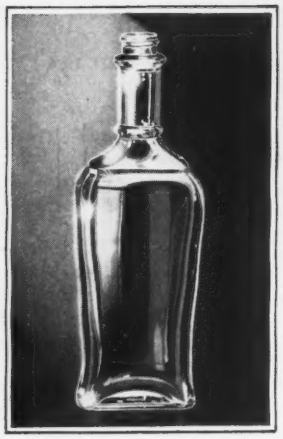

Mixer shown in background receives weighed material from above. After mixing, the materials are dumped in the track hopper in the foreground which leads to the furnaces.

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